State of Utah

Department of Environmental Quality

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

Dianne R. Nielson, Ph.D.
Executive Director

DIVISION OF AIR QUALITY
Richard W. Sprott
Director

DAQ-057-06

UTAH AIR QUALITY BOARD MEETING

DRAFT AGENDA

Wednesday, September 6, 2006
1:30 p.m.

168 North 1950 West (Bldg #2) Room 101

I. Call-to-Order.

II. Date of the Next Air Quality Board Meeting: October 4, 2006.

III. Approval of the Minutes for August's Board Meeting.

IV. Final Adoption: Amend R307-415-4(2), Operating Permits - Source Category Exemptions - Addition of Five Area Source Exemptions. Presented by Robert Grandy.

V. Proposed for Public Comment: Operating Permit Program Fee for Fiscal Year 2008. Presented by Dave Beatty.

VI. Propose for Public Comment: 8-Hour Ozone Maintenance Provisions for Salt Lake and Davis Counties, to replace Section IX.D of the Utah State Implementation Plan (SIP). Amend R307-110-13 to reflect this change. Presented by Robert Clark.

VII. Propose for Public Comment: Amend R307-320, Davis, Salt Lake and Utah Counties, and Ogden City: Employer-Based Trip Reduction Program; R307-325, Davis and Salt Lake Counties and Ozone Nonattainment or Maintenance Areas: Ozone Provisions; R307-326, Davis and Salt Lake Counties and Ozone Nonattainment Areas: Control of Hydrocarbon Emissions; R307-327, Davis and Salt Lake Counties and Ozone Nonattainment Areas: Petroleum Liquid Storage; R307-328, Davis, Salt Lake, Utah and Weber Counties and Ozone Nonattainment Areas: Gasoline Transfer and Storage; R307-335, Davis and Salt Lake Counties and Ozone Nonattainment Areas: Degreasing and Solvent Cleaning Operations; R307-340, Davis and Salt Lake Counties and Ozone Nonattainment

Areas: Surface Coating Operations; R307-341, Davis and Salt Lake Counties and Ozone Nonattainment Areas: Cutback Asphalt; R307-342, Davis, Salt Lake, Utah and Weber Counties and Ozone Nonattainment Areas: Qualification of Contractors and Test Procedures for Vapor Recovery Systems for Gasoline Delivery Tanks; R307-343, Davis and Salt Lake Counties and Ozone Nonattainment Areas: Emissions Standards for Wood Furniture Manufacturing Operations; and R307-101-2, Definitions. Presented by Robert Clark.

VIII. Deletion of R307-332 from the Air Quality Rules. Presented by Robert Clark.

IX. Informational Items
- A. Open Meetings Act Presentation: Presented by Fred Nelson.
- B. Clean Air Mercury Rule (CAMR); Status Report. Presented by Mat Carlile.
- C. Compliance. Presented by Jeff Dean.
- D. HAPS. Presented by Robert Ford.
- E. Monitoring. Presented by Bob Dalley.

In compliance with the American with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Charlene Lamph, Office of Human Resources at (801) 536-4413 (TDD 536-4414).

UTAH AIR QUALITY BOARD MEETING
August 2, 2006

DRAFT MINUTES

I. Call to Order

John Veranth called the meeting to order at 1:33 p.m.

Board members present:

Ernest Wessman	Jerry Grover	Jim Horrocks	Wayne Samuelson
John Veranth	Nan Bunker	JoAnn Seghini	Don Sorensen
Scott Lawson	Dianne Nielson via phone		

Board members excused:

Stead Burwell

Executive Secretary: Richard W. Sprott

II. Date of the Next Air Quality Board Meetings

September 6, October 4 and November 1, 2006 are set as tentative dates for the next Board meetings.

III. Approval of the Minutes for June 15, 2006 Board Meeting

Mr. Veranth requested that some minor changes be made**.**

- Ms. Seghini made the motion to approve June's minutes as amended. Ms. Bunker seconded and the Board approved unanimously.

IV. Approval of "Findings and Conclusions and Order" in the matter of Sevier Power Company Power Plant, DAQE-AN2529001-04. Presented by Fred Nelson.

Mr. Nelson stated that on June 15, 2006, parties and participants appeared before the Utah Air Quality Board for a final hearing on a Request for Agency Action by Sevier County Citizens for Clean Air and Water ("Sevier Citizens") appealing an Approval Order granting a permit to Sevier Power Company ("SPC") to construct and operate a coal-fired power plant in Sevier County, Utah, issued on October 12, 2004. The Board heard the matter and Mr. Nelson has drafted a Findings and Conclusion Order. All parties involved have reviewed it. A few typographical errors were noted and the changes will be made.

- Mr. Horrocks made the motion to approve the order as amended. Ms. Bunker seconded and the Board approved unanimously. Mr. Wessman had recused himself during the matter so he abstained to approve the order.

V. Request for Revisions in R307-202, Emission Standards: General Burning. Presented by Ted Black, Weber County Fire Marshal.

Mr. Black requested that horticultural and agricultural operations used in R307-202-1 be defined. Second he requested that the board revise R307-202-5, 3. Third he would like to have clarification from the Board on section 19-2-114 regarding activities not in violation of chapter or rules.

Mr. Bird stated that the Board has not made an explicit definition of what horticultural and agricultural operations are. Mr. Bird stated that the 30-day notification can be modified, split up and also extended by request. Mr. Sprott stated that DAQ would work with the Fire Marshall. A rule change could be made but it has to be approved by EPA. Mr. Sprott will set up a meeting with the Fire Marshall and report back to the Board. Mr. Nelson stated 19-2-114-1 is dealt with on a case-by-case basis. Federal law does not let you burn a building containing asbestos and there are other requirements that have to be complied with as well.

VI. Informational Items

A. Air Quality Complaints in West Bountiful from Syro Steel Plant. Presented by Mayor Jim Buhunin.

Mayor Buhunin had a power point presentation and presented visual aids regarding the complaints from the Syro Steel Plant. The compliant is that there is an orange fog that comes from the plant and it leaves an orange film on many things, cars, metal, and vinyl surfaces. The Mayor is worried about the health concerns in the city and would like DAQ to find out what it is. There were complaints from the public regarding their health.

Mr. Sorensen stated that it sounds like a nuisance issue and the plant should resolve it. Mr. Horrocks asked what the division knew about the issue. Mr. Bird stated that it is a grandfathered source. They have made additions of control systems. They meet the opacity requirements and they are still at 40%. The regulatory tools that DAQ has are limited. The complaint history started in 1992 regarding visible emissions and residue. They have done onsite inspections and there have been no compliance issues. DAQ checked the metals content and evaluated the PM10 and PM2.5 and there were no exceedances. Dr. Samuelson asked if there were any health reports on children in the area. Mayor Behunin stated that there were no reports and he is not aware of a higher incident of asthma. Mr. Grover asked if DAQ has collected the residue. Mr. Bird stated that is not our normal protocol. Mr. Horrocks stated that there is a problem in the area and it may not be up to the Board to do it. But it seems that there is a potential hazard and the problem needs to be resolved. Mr. Sprott stated that DAQ will work with the health department. He admits that there are health concerns, environmental concerns and quality of life concerns. His recommendation is to look at the deposition and to do a scientific and health analysis. DAQ has a toxicologist on staff and Dr. Packham could put

together a plan and he would get together and consult with the Mayor and give feedback and the results.

B. Ozone 8-hour Maintenance Plan, Status Report, Report on Stakeholder Meeting held July 26. Presented by Bob Clark.

Mr. Clark stated that a draft of the ozone 8-hr maintenance plan has been prepared, draft changes of ozone related rules have also been prepared. An ozone web site has been set up for the public to view the draft 8-hour maintenance plan and the ozone rules. The 8-hour ozone Technical Support Document (TSD) is on file in the DAQ offices. The draft maintenance plan and a copy of the TSD were forwarded to EPA on July 13, 2006 for comments. A stakeholder meeting was held on July 26, 2006 to gather public input on the 8-hr ozone maintenance plan and proposed rule changes prior to their presentation to the Air Quality Board. The 8-hr ozone maintenance plan and rules will be on the agenda for the September Air Quality Board meeting. If proposed for public comment by the Air Quality Board, the comment period will be in October 2006. Following any revisions generated by comments, DAQ staff will present it to the Air Quality Board for final approval in November or December 2006. Following adoption by the Air Quality Board, this maintenance plan will be forwarded to EPA in early 2007 for federal approval. It will remain in effect until it is revised by the State, and contingency measures included in the plan could be triggered if the area subsequently violates the 8-hour standard.

C. Open Meetings Act Presentation: Presented by Fred Nelson.

This will be presented at the next Board meeting.

D. Upcoming Presentations to the Board on Integrated Gasification Combined Cycle (IGCC) Power Generation Technology. Presented by Rick Sprott.

Mr. Sprott stated he would like to give the Board more in depth information on IGCC and he would like to start with background first. It would be a lunch meeting for 30-45 minutes. It will benefit and educate the Board. The training could start as soon as October.

E. Holcim Permit Status Report. Presented by John Jenks.

Mr. Jenks stated that the Holcim permit has gone out to public comment and he expects comments from EPA August 3, 2006. The permit should be issued in about a week.

F. Compliance. Presented by Jeff Dean.
G. HAPS. Presented by Robert Ford.
H. Monitoring. Presented by Bob Dalley.

Mr. Dalley went over the latest air quality monitoring data.

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DAQ-063-06

MEMORANDUM

TO: Air Quality Board

THROUGH: Richard Sprott, Executive Secretary

FROM: Robert Grandy, Environmental Engineer

DATE: August 16, 2006

SUBJECT: Final Adoption: Amend R307-415-4(2), Operating Permits - Source Category Exemptions - Addition of Five Area Source Exemptions

At the June 15 Board meeting, amendments in R307-415-4(2) were proposed for public comment. The comment period was open July 1 - 31, and no comments were received.

Recommendation: Staff recommends that R307-415-4(2) be adopted as proposed. The text is attached for your review.

R307. Environmental Quality, Air Quality.
R307-415. Permits: Operating Permit Requirements.
R307-415-4. Applicability.

(1) Part 70 sources. All of the following sources are subject to the permitting requirements of R307-415, and unless exempted under (2) below are required to submit an application for an operating permit:

(a) Any major source;

(b) Any source, including an area source, subject to a standard, limitation, or other requirement under Section 111 of the Act, Standards of Performance for New Stationary Sources;

(c) Any source, including an area source, subject to a standard or other requirement under Section 112 of the Act, Hazardous Air Pollutants, except that a source is not required to obtain a permit solely because it is subject to regulations or requirements under Section 112(r) of the Act, Prevention of Accidental Releases;

(d) Any Title IV affected source.

(2) [~~Source category e~~]Exemptions.[~~ The following source categories are exempted from the requirement to obtain an operating permit.~~]

(a) All[~~ sources and~~] source categories that would be required to obtain an operating permit solely because they are subject to 40 CFR Part 60, Subpart AAA - Standards of Performance for New Residential Wood Heaters, are exempted from the requirement to obtain a permit.[~~,~~]

(b) All [~~sources and~~]source categories that would be required to obtain an operating permit solely because they are subject to 40 CFR Part 61, Subpart M - National Emission Standard for Hazardous Air Pollutants for Asbestos, Section 61.145, Standard for Demolition and Renovation, are exempted from the requirement to obtain a permit. For Part 70 sources, demolition and renovation activities within the source under 40 CFR 61.145 shall be treated as a separate source for the purpose of R307-415.

(c) Certain area sources have been exempted from the requirement to obtain an operating permit under a subpart of 40 CFR Part 63. These include:

(i) 40 CFR Part 63, Subpart M, National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities;

(ii) 40 CFR Part 63, Subpart N, National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks;

(iii) 40 CFR Part 63, Subpart O, Ethylene Oxide Emission Standards for Sterilization Facilities;

(iv) 40 CFR Part 63, Subpart T, National Emission Standards for Halogenated Solvent Cleaning;

(v) 40 CFR Part 63, Subpart RRR, National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.

(3) Emissions units and Part 70 sources.

(a) For major sources, the Executive Secretary shall include in the permit all applicable requirements for all relevant emissions units in the major source.

(b) For any area source subject to the operating permit program under R307-415-4(1) or (2), the Executive Secretary shall include in the permit all applicable requirements applicable to emissions units that cause the source to be subject to the operating permit program.

(4) Fugitive emissions. Fugitive emissions and fugitive dust from a Part 70 source shall be included in the permit application and the operating permit in the same manner as stack emissions, regardless of whether the source category in question is included in the list of source categories contained in the definition of major source.

(5) Control requirements. R307-415 does not establish any new control requirements beyond those established by applicable requirements, but may establish new monitoring, recordkeeping, and reporting requirements.

(6) Synthetic minors. An existing source that wishes to avoid designation as a major Part 70 source under R307-415, must obtain federally-enforceable conditions which reduce the potential to emit, as defined in R307-101-2, to less than the level established for a major Part 70 source. Such federally-enforceable conditions may be obtained by applying for and receiving an approval order under R307-401. The approval order shall contain periodic monitoring, recordkeeping, and reporting requirements sufficient to verify continuing compliance with the conditions which would reduce the source's potential to emit.

KEY: air pollution, environmental protection, operating permit, emission fee
Date of Enactment or Last Substantive Amendment: [~~August 3, 2004~~]2006
Notice of Continuation: February 9, 2004
Authorizing, and Implemented or Interpreted Law: 19-2-109.1; 19-2-104

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DAQ-065-06

MEMORANDUM

TO: Air Quality Board

THROUGH: Richard W. Sprott, Executive Secretary
Utah Air Quality Board

FROM: David Beatty, Manager
Operating Permits Section

DATE: August 22, 2006

SUBJECT: Proposed for Public Comment: Operating Permit Program Fee for Fiscal Year 2008

Background:

Title V of the Clean Air Act Amendments of 1990 (CAAA) requires the State of Utah to develop an Operating Permit Program (OPP) to include a fee system which is to be used to fund all direct and indirect costs associated with administering the OPP. Section 19-2-109.1 (4)(a) of the Utah Conservation Act authorizes the Utah Air Quality Board (the Board) to propose to the legislature an annual emission fee that conforms to Title V of the CAAA for each ton of regulated pollutant.

Utah began collecting an emission fee during fiscal year 1993, based on tons of air pollution emitted, to fund development of the program. The fee has increased in varying increments by 1.4% to 12.3% (one year decreased 4.3%). The current fee charged to fund fiscal year 2007 is $43.03 per ton of emissions. Most fee increases have been the result of reduced emission tonnages by sources, and increasing salaries and benefits to staff. Staff size has been reduced since 1995 from 39 FTE's to the current level of 31.5 FTE's, this has assisted in keeping fee increases as low as possible.

For fiscal year 2008 staff is basing its proposal on an emissions inventory of 77,500 tons, an amount lower than that of the last few years due to continued small decreases by many sources. Additionally, staff is proposing to base the fee on a staff size of 31.5 FTE's. The fee calculation is shown in the table below and includes a benefit and merit increase of 7.5%

Operating Permit Emission Fee for Fiscal Year 2008:

FY2007 Projected Salary + Benefits	$2,507,900	
FY2008 Projected Increase @ 7.5%	$188,092	
FY2008 Projected Salary + Benefits w/ Projected Increase		$2,695,992
FY2008 Indirect Costs (Using 15.93% from FY 2007)	$429,472	
FY2008 Direct Costs (Using FY2007 projections)	$473,553	
FY2008 Projected Total Expenditures		$3,599,017
FY2008 Projected Fee Tonnage	77,500	
FY2008 Proposed Fee Rate Per Ton of Emissions		**$46.44**[1]

[1]Current Fee (FY2007) is $43.03, Difference is $3.41 per ton

Therefore, staff recommends that the Board submit as part of the Department's fee schedule, a proposed fee of $46.44/ton for the operating permit program for fiscal year 2008.

As part of the fee development process, the fee is included as part of the Department's fee schedule each fall. Additionally, a public comment period will be held to allow an opportunity for interested parties to comment on the Department fee schedule and a public hearing will be scheduled during October 2006. Notice of the comment period and public hearing will be provided in the Legal Notices section of the major newspapers in the state.

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M E M O R A N D U M

TO: Air Quality Board

THROUGH: Richard W. Sprott, Executive Secretary

FROM: Robert Clark, Environmental Scientist

DATE: September 6, 2006

SUBJECT: Propose for Public Comment: *8-Hour Ozone Maintenance Provisions for Salt Lake and Davis Counties*, to replace Section IX.D of the Utah State Implementation Plan (SIP). Amend R307-110-13 to reflect this change.

In July 1997, the EPA established a new, more rigorous standard for ozone. The new 8-hour standard was set at a level of 0.08 ppm (parts per million) averaged over an eight-hour period. Salt Lake and Davis Counties were designated as "attainment" under the 8-hour standard. The remainder of the State was designated as "attainment/unclassifiable."

Because Salt Lake and Davis Counties were attainment areas operating under an existing 1-hour ozone maintenance plan, EPA guidance requires a streamlined maintenance plan under the more general requirements of Section 110(a)(1) of the Clean Air Act. This guidance requires the 8-hour ozone maintenance plan to provide for continued maintenance of the 8-hour National Ambient Air Quality Standard (NAAQS) through 2014. It also specifies the required components of the plan, including an attainment inventory, a maintenance demonstration, an air quality monitoring program, a contingency plan, and a plan to verify continued attainment of the 8-hour NAAQS. The establishment of a Transportation Conformity Budget is not required under Section 110(a)(1). The guidance also stipulates that the maintenance plan would remain in effect after the initial 10-year period (2004-2014), and that contingency measures could still be triggered if the area subsequently violates the 8-hour standard.

There are several important differences between this 8-hour maintenance plan and the 1-hour plan:

1. The 1-hour maintenance plan included a case-by-case volatile organic compound (VOC)

reasonably available control technology (RACT) determination for Hill Air Force Base (Hill) and Olympia Sales. The intent of that determination was to demonstrate that current operations at these two sources were RACT, and that any future changes would be covered by the new source review (NSR) program. EPA interpreted this state implementation plan (SIP) provision in a more stringent manner than intended, and considered every provision in the applicable approval orders to be a SIP condition. To resolve this unworkable interpretation, we have worked with Hill to develop a new RACT determination for Hill to reflect underlying standards such as Utah's RACT rules and federal maximum achievable control technology (MACT) standards. Because the MACT standards were implemented since the previous 1-hour maintenance plan was adopted, the overall RACT level will now be more stringent than what was considered RACT in the mid-1990's.

2. When the 1-hour ozone maintenance plan was originally adopted in 1993, EPA required Utah to include contingency measures that were already adopted and could be implemented quickly. It was later discovered that the contingency measures did not need to be adopted, but could be identified as potential contingency measures that could be evaluated and adopted within a reasonable time period after an ozone violation occurred. In this 8-hour maintenance plan, a list of possible contingency measures is included. However, DAQ is recommending deleting the pre-approved rules for Stage II Vapor Recovery and several other contingencies because if and when they may be triggered in the future, those contingencies that are implemented will be selected based on information available at that time.

3. The Inspection and Maintenance Program performance standards for Salt Lake and Davis Counties are reestablished using EPA MOBILE6 software and the target years have been extended through 2014.

4. Everything addressing the 1-hour NAAQS is deleted. This plan was adopted in the early 1980's and is no longer applicable because it was developed to attain the 1-hour ozone standard.

This SIP was developed according to current EPA guidance and demonstrates that Salt Lake and Davis Counties will remain in compliance to the Ozone NAAQS through 2014.

Recommendation**:** Staff recommends that the 8-hour ozone maintenance plan be proposed for public comment and that R307-110-13 be amended to reflect this change.

Utah State Implementation Plan

Section IX, Part D

8-HOUR OZONE MAINTENANCE PROVISIONS FOR SALT LAKE AND DAVIS COUNTIES

Adopted by the Air Quality Board

December 6, 2006

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List of Acronyms Used in this Document

ACT	Alternative Control Technique
AIRS	Aerometric Information Retrieval System (an EPA database)
AO	Approval Order
AQB	(Utah) Air Quality Board
BACT	Best Available Control Technology
BEIS2	Biogenics Emission Model
CAA	Federal Clean Air Act, amended in November 1990
CTG	Control Technique Guidance Document
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
EDMS	Emissions and Dispersion Modeling System
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
HPMS	Highway Performance Monitoring System
I/M	Inspection and Maintenance Program for automobiles
KUC	Kennecott Utah Copper Corporation
LTO	Landing and Take Off
MACT	Maximum Achievable Control Technology, established under Title III of the CAA
MNR	Monitoring Network Review
MOBILE6	A model for mobile source emissions
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MSW	Municipal Solid Waste
NAAQS	National Ambient Air Quality Standards
NAMS	National Air Monitoring Station
NO_x	Oxides of Nitrogen
NONROAD	A model for non road source emissions
NSR	New Source Review
PM_{10}	Particulate matter with an aerodynamic diameter of less than 10 microns
RACT	Reasonably Available Control Technology
RVP	Reid Vapor Pressure
SBAP	Small Business Assistance Program
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Station
T/D	Tons per Day
T/Y	Tons per Year
TSD	Technical Support Document
UDOT	Utah Department of Transportation
UDEQ	Utah Department of Environmental Quality
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WFRC	Wasatch Front Regional Council

D. OZONE MAINTENANCE PLAN

1. Introduction

The State of Utah has developed this maintenance plan for the 8-hour National Ambient Air Quality Standard (NAAQS) in accordance with Section 110(a)(1) of the Clean Air Act (CAA). Salt Lake and Davis Counties were found to be in attainment on July 18, 1995 (60 FR 36723) under the 1-hour ozone NAAQS and have been operating under an approved maintenance plan (62 FR 38213) since July 17, 1997. This maintenance plan demonstrates that Salt Lake and Davis Counties have achieved the 8-hour ozone standard and can maintain compliance with the standard through 2014. The remainder of the State of Utah is currently designated unclassifiable/attainment.

a. Maintenance Plan Overview

This maintenance plan uses an emission inventory approach and demonstrates that projected future emissions will be less than base year emissions. Emission inventories used in this maintenance plan were developed for an actual typical summer day using 2002 as the base year with projections for the years 2005, 2008, 2011, and 2014.

Federal approval of this maintenance plan is necessary to enable the State of Utah to maintain its ozone attainment/maintenance designation under the new 8-hour NAAQS.

b. Historical Background

The original CAA required areas failing to meet the federal ambient ozone standard to develop State Implementation Plans (SIP) with sufficient control requirements to expeditiously attain and maintain the standard. In 1977, Weber, Davis, Utah and Salt Lake Counties were designated non-attainment for ozone. In 1981 the EPA re-designated Weber and Utah Counties as attainment for ozone. In April of 1981, an ozone SIP was submitted to EPA that demonstrated attainment of the standard for both Davis and Salt Lake Counties by May 1, 1984. This ozone SIP submittal was fully approved by the EPA.

In November of 1990, Congress amended the Federal CAA. As a result, Salt Lake and Davis Counties were designated as "moderate" non-attainment areas based on ambient monitoring data for 1988 and 1989. On November 12, 1993 Utah submitted a formal request to EPA that the Salt Lake/Davis County non-attainment area be re-designated to attainment of the NAAQS, and the State, in accordance with the Act, submitted a maintenance plan. In June of 1994, on the basis of a reorganized state submittal and a parallel processing request, EPA issued a finding of "completeness" effective May 12, 1994. On January 5, 1995, the Ozone Maintenance Plan for Salt Lake and Davis Counties was revised. In April of 1995 volatile organic compound (VOC) Reasonably Available Control Technology (RACT) commitments were updated and in August of

1995 the contingency measures were revised to be consistent with language in the 1990 amended CAA.

By March of 1996, the Utah Division of Air Quality (DAQ) had obtained 1994 inventory data and had developed a more realistic methodology for projecting non-road emissions. Since there were no violations or exceedances of the ozone standard in 1994, and since there existed sufficient inventory data, DAQ prepared a new revision of the plan in which 1994 was established as the attainment year inventory for the demonstration of maintenance through the year 2007. The Utah Air Quality Board (AQB) adopted this revision on June 5, 1996.

By October of 1996, both Salt Lake and Davis Counties had finalized the details of the improvements to their vehicle inspection and maintenance (I/M) programs, which would be fully implemented in 2000 and 1998 respectively. The maintenance plan was revised to reflect the actual I/M programs that would be used in the area. The State also requested an exemption from additional oxides of nitrogen (NO_x) RACT requirements under section 182(f) of the CAA because the area had already attained the ozone standard and additional reductions were not needed to show maintenance of the standard. In July of 1997, the EPA approved the Ozone Maintenance Plan and NO_x RACT exemption for Salt Lake and Davis Counties, effective August 18, 1997, and re-designated both counties to attainment for ozone.

In July of 1997, the EPA established a new, more rigorous standard for ozone. The new 8-hour standard was set at a level of 0.08 parts per million (ppm) averaged over an eight-hour period. To take into account extreme and variable meteorological conditions that can influence ozone formation, a violation of the standard occurs when the three-year average of the fourth-highest, maximum value at a monitor exceeds the federal standard. Due to numerical rounding conventions, a violation occurs when the three-year average of the 4^{th} highest daily 8-hour average ozone concentration is equal to or greater than 0.085 ppm.

On April 30, 2004 (69 FR 23951), EPA published the first phase of its final rule (Phase I Rule) to implement the 8-hour ozone NAAQS. At the same time EPA also published 8-hour ozone designations for all areas of the country. All areas of Utah were designated attainment or unclassifiable. These designations became effective on June 15, 2004. The Phase I rule provided that the 1-hour ozone NAAQS would no longer apply (i.e. be revoked) one year following the effective date of the 8-hour ozone NAAQS, or June 15, 2005. This revocation action was affirmed at 70 FR 44470 on August 3, 2005.

EPA issued final guidance for the development of the 8-hour ozone CAA Section 110(a)(1) maintenance plan on May 20, 2005. On November 29, 2005, EPA published the "Final Rule to Implement the 8-hour Ozone National Ambient Air Quality Standard (NAAQS) - Phase II." (70 FR 71611)

This maintenance plan was developed in accordance with the guidance and directions included therein.

2. Attainment Emission Inventory

Requirements relating to Attainment Emission Inventory:

- *The state can choose to demonstrate maintenance of the NAAQS using an emissions inventory approach. This approach requires the development of an "attainment emission inventory" to identify the level of emissions in the area that are sufficient to maintain the standard.*

- *The attainment emission inventory should be consistent with EPA guidance, and should include emissions during the time period associated with the monitoring data showing attainment. EPA recommended using the 2002 emission inventory.*[1]

Ozone is a gas composed of three oxygen atoms. Ozone at ground level, where it can be inhaled, is a pollutant. It is rarely emitted directly into the air, but rather is the result of a complex chemical reaction between volatile organic compounds (VOC) and oxides of nitrogen (NO_x). These compounds, when combined in the presence of intense sunlight, may cause ground-level ozone to form in harmful concentrations in the air.

$$\text{VOC} + \text{NO}_x \xrightarrow{\text{(Sunlight)}} \text{Ozone}$$

This SIP is based on emission inventories of VOC and NO_x, and documents that future emission levels of these precursors to ozone will be lower than present levels. As recommended by the EPA, the State of Utah has chosen to use 2002 as the attainment base year for this maintenance plan. An emission inventory for 2002 was developed to provide a base from which to evaluate future emissions. The emissions inventory is divided into four major source categories: point sources, area sources, mobile sources, and naturally occurring biogenic sources. Mobile sources are further divided into on-road and non-road categories. A short discussion of each of these categories will follow after Figure 2. A more in-depth discussion of each category is included in the Emission Inventory section of the Technical Support Document (TSD).

As required by EPA, DAQ applied rule effectiveness based on the revised rule effectiveness guidance found in Appendix B of EPA-454/R-005-01 entitled “Emissions Inventory Guidance of Ozone and Particulate Matter National Ambient Air Quality Standard (NAAQS) and Regional Haze Regulations.” Rule effectiveness is a measure of the ability of the regulatory program to achieve all of the emission reductions possible by full compliance with applicable rules at all covered sources at all times. It reflects the assumption that rules are not typically 100 percent effective at all times.

A summary of the emission inventory for the 2002 base year with interim projections to 2014 is represented in Tables 1 and 2 for a typical summer day during the ozone season (June – August). Figures 1 and 2 represent relative percentages of 2002 emissions by source type. The 2002

[1] Each subdivision of this Plan begins with a summary of the requirements set forth in EPA's *Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of Clean Air Act*, May 30, 2005.

emission inventory, in its entirety, is included in the TSD. A graphical depiction of the emission projections for 2005-2014 and the maintenance demonstration can be found in the next subsection of this plan.

Table 1. Salt Lake and Davis Counties Source Category Totals for VOC (tons/day)

VOC	2002	2005	2008	2011	2014
Point Source	11.24	11.21	11.66	11.96	12.36
Area Source	89.14	92.27	96.14	101.69	107.54
Biogenic Source	120.26	120.26	120.26	120.26	120.26
Mobile On Road	57.66	44.70	35.36	29.11	24.52
Non-Road	29.55	25.47	20.90	18.42	16.57
Total (tons/day)	307.85	293.91	284.32	281.44	281.25
Attainment	307.85	307.85	307.85	307.85	307.85

Figure 1. Salt Lake and Davis Counties 2002 Source Percentage of VOC

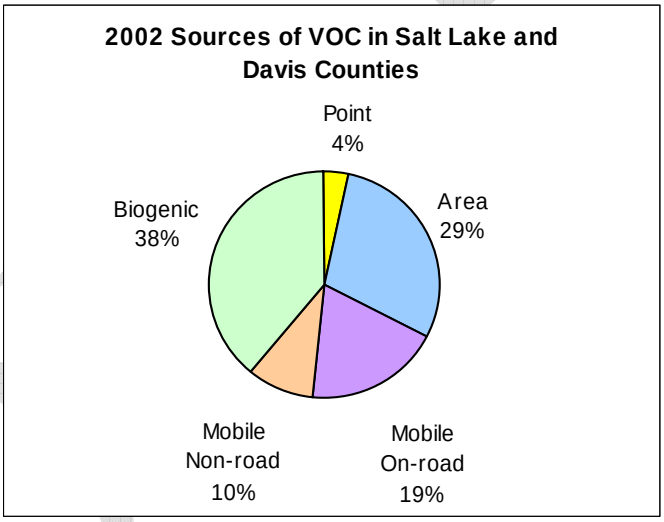
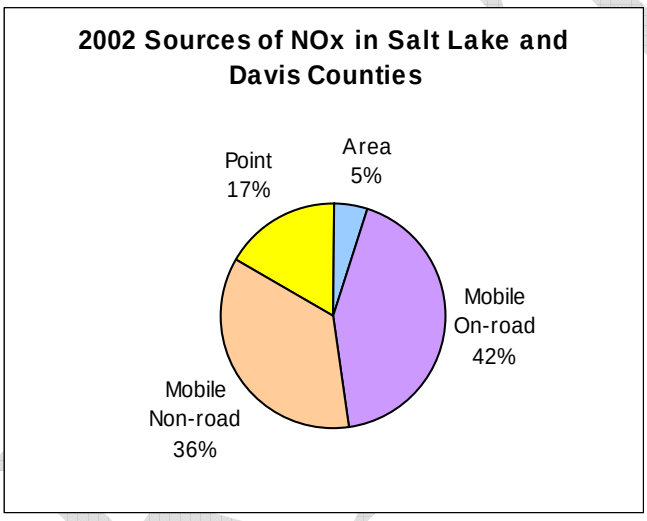


Table 2. Salt Lake and Davis Counties Source Category Totals for NOx (tons/day)

NOx	2002	2005	2008	2011	2014
Point Source	39.27	38.09	37.78	36.75	36.82
Area	11.36	10.08	10.79	11.82	12.82
Mobile On-Road	98.89	85.52	65.47	49.45	35.92
Non-Road	83.87	80.35	72.56	63.48	51.30
Total	233.39	214.04	186.60	161.50	136.86
Attainment	233.39	233.39	233.39	233.39	233.39

Figure 2. Salt Lake and Davis Counties 2002 Source Percentage of NOx



a. Point Source Emissions

Sources included in the point source portion of the attainment year inventory include all stationary sources with actual annual emissions of 100 tons or more of VOC or NO_x. Stationary sources with 2002 actual annual emissions of less than 100 tons of VOC or NO_x were included in the area source portion of the inventory. The 2002 emissions inventory for stationary point sources is based on actual activity levels during the peak ozone season and reflects estimated actual emissions. In compliance with EPA guidance, emission estimates were adjusted to reflect current rule effectiveness guidance.

b. Area Source Emissions

The area source inventory estimates VOC and NO_x emissions by county. This inventory includes sources whose annual emissions from any single source location are less than 100 tons for VOC or NO_x. Non-road mobile source emissions such as aircraft maintenance and engine emissions, railroad switch engine and line-haul emissions, and miscellaneous emissions from all other non-road sources are included in the area source inventory, but reported separately as the non-road emission inventory

as discussed below. The area source inventory was examined for double counting of emissions already included in the state's point source inventory and adjusted accordingly. All emission estimates in the area source inventory were reported in tons-per-peak-ozone-season day to reflect conditions most typical of higher ozone concentrations.

Area source emissions include small stationary sources such as gasoline stations and degreasing operations that are controlled through VOC regulatory rules. VOC emissions from vehicle refueling are also included in the area source emissions inventory. In compliance with EPA guidance, emission estimates for area sources covered by existing rules were adjusted to reflect current rule effectiveness guidance. These categories included asphalt paving, yard waste burning, municipal solid waste (MSW) burning, and gasoline transport vehicles.

c. Mobile Source Emissions

Emissions from on-road mobile sources include all VOC and NO_x from automobiles, trucks, and motorcycles designed for travel on established federal, state, or local roads. Calculated emissions from these vehicles are in the form of tailpipe exhaust, evaporation from the engine and fuel systems, and any other vapor losses during the running and resting of the vehicles.

Emissions from non-road mobile sources include tailpipe exhaust, evaporation from the engine and fuel systems of vehicles and construction equipment operated on unpaved roads, exhaust emissions or vapor losses resulting from the operation of railroad locomotives, airplanes, recreational, lawn and garden equipment, and from any other portable petroleum-fueled equipment.

VOC refueling emissions resulting from vehicle refueling at gasoline, ethanol, or natural gas stations are considered area emissions.

(1) On-Road Emissions. The on-road emissions inventory was generated by combining VOC and NO_x emission factors with estimates of peak summer weekday vehicle miles traveled (VMT) in Salt Lake and Davis Counties. Calculated on-road mobile emissions are aggregated by county for a peak ozone weekday. Details on the methodology used to compute emission estimates for the on-road mobile source inventory are delineated in the on-road emission inventory TSD.

Emission factors were derived from the EPA's mobile sources emissions model, MOBILE6 that provides emission factors for vehicle exhaust tailpipe emissions and evaporative emissions. The September 2003 version of MOBILE6, MOBILE6.1/6.2, incorporates the current federal tailpipe standards required by the CAA. It allows users to input local parameters that describe the vehicle fleet, vehicle emission control programs, the road network, fuel properties and meteorological conditions for the peak ozone weekday.

All MOBILE6 parameters involving I/M and the anti-tampering programs were measured, estimated, or confirmed by the Salt Lake County and Davis County Health Departments who administer these programs in their respective jurisdictions.

Utah Department of Transportation (UDOT) staff issues an annual report entitled *VMT by Functional Class*. This summary report tabulates actual VMT in average-annual-daily traffic. VMT is obtained from the Highway Performance Monitoring System (HPMS) database and

reports VMT for twelve functional roadway classes in each city and county in the state. The Wasatch Front Regional Council (WFRC) regroups UDOT VMT from twelve to four classes; freeway, ramp, arterial, and local roads. The WFRC Travel Demand Model adjusts the annual average daily VMT to average-summer-weekday VMT using conversion factors provided within the model. The conversion factors and methods are explained in the TSD for on-road mobile sources.

Since the HPMS model does not estimate vehicle speeds, the WFRC supplied vehicle speed estimates for 2002 using the most recent population, employment, travel, road network, and traffic congestion data.

(2) Non-Road Emissions. Emissions from non-road mobile sources include releases from railroad locomotives, airplanes, recreational vehicles, construction equipment, lawn and garden equipment, and any other non-road petroleum-fueled vehicle or equipment.

(a) Trains. The two railroad companies operating within Salt Lake and Davis Counties submitted reports of their locomotive activities. Line-haul activity was reported in terms of fuel usage while yard activity was reported in terms of number of yard locomotives. These data were combined with emission factors published in EPA's "Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources" (EPA 420-R-92-009) to estimate peak-ozone-day emissions.

(b) Aircraft Engines**.** The WFRC studied and summarized the airport activity of commercial, military, and private aircraft at each airport within the Salt Lake and Davis County area. They reported landing and take off (LTO) counts for specific aircraft types. To further refine commercial aircraft emissions, the publication *Airport Activity Statistics of Certificated Route Air Carriers* provided an itemized list of aircraft makers, models and the number of flights. Using the EPA/FAA Emission and Dispersion Modeling System (EDMS) version 4.04 software package, emissions of VOC and NO_x per LTO were calculated. The numbers of LTOs during an ozone day were estimated to produce peak-ozone-day emissions.

(c) Other Non-Road Engines**.** This section presents the 2002 base year inventory of emissions from non-road engines other than trains and airplanes. Emissions were estimated for each of 212 non-road engine categories and then totaled. Emissions from non-road engine categories associated with the construction, manufacturing, mining and agricultural industries were based on EPA NONROAD version 2004.

d. Biogenic Emissions

Biogenic emissions are natural VOC losses from forests, field crops, and all other plant matter growing or decomposing within the maintenance area. These emissions were calculated using EPA's BEIS 3.12 model, and incorporated into the emissions inventory for Salt Lake and Davis Counties. Based on future long-range land use planning for the area, these emissions are forecast to remain relatively constant throughout the period covered by this maintenance plan.

3. Maintenance Demonstration

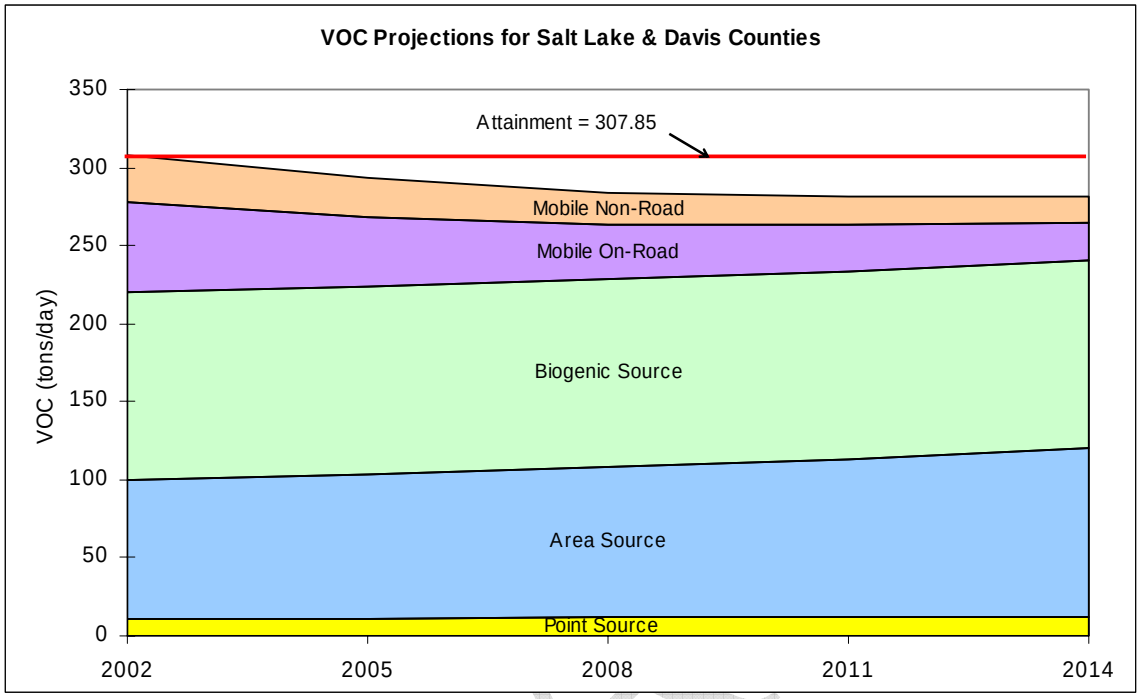
Requirement relating to Maintenance Demonstration:

- *A Maintenance Demonstration is a compilation of Projection inventories that demonstrate how an area will remain in compliance with the 8-hour ozone standard for the ten-year period following the effective date of designation as unclassifiable or attainment. For areas with an effective date of designation for the 8-hour NAAQS of June 15, 2004, the end projection year shall be 2014 and must show attainment.*

a. Base Year and Projected Emission Inventories

The attainment emission inventory reported in section IX.D.2 documents a level of emissions in Salt Lake and Davis County that is sufficient to maintain the 8-hour NAAQS for ozone through 2014. Emissions projections for each source category are used to determine if expected emission levels in future years will exceed the 2002 attainment emission inventory level. Maintenance of the NAAQS is demonstrated if the projected emissions remain below the 2002 level. Figures 3 and 5 graphically demonstrate that the projected VOC and NO_x emission inventories remain below the 2002 level, through the year 2014. Summary tables showing VOC and NO_x peak ozone season daily emissions in tons/day are included in the TSD.

Figure 3. VOC Projections through 2018 for Salt Lake and Davis Counties (tons/day)



Figures 4 and 6 give a pictorial look at the sources of VOC and NO_x for the attainment year of 2002 and the end projection year of 2014.

Figure 4. Salt Lake and Davis Counties 2002 and 2014 VOC Sources

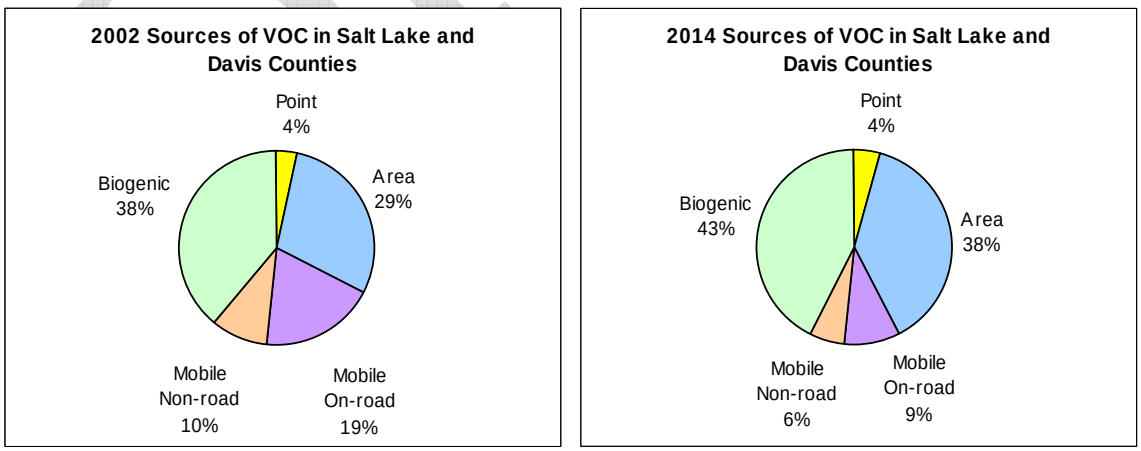


Figure 5. NO_x Projections through 2018 for Salt Lake and Davis Counties (tons/day)

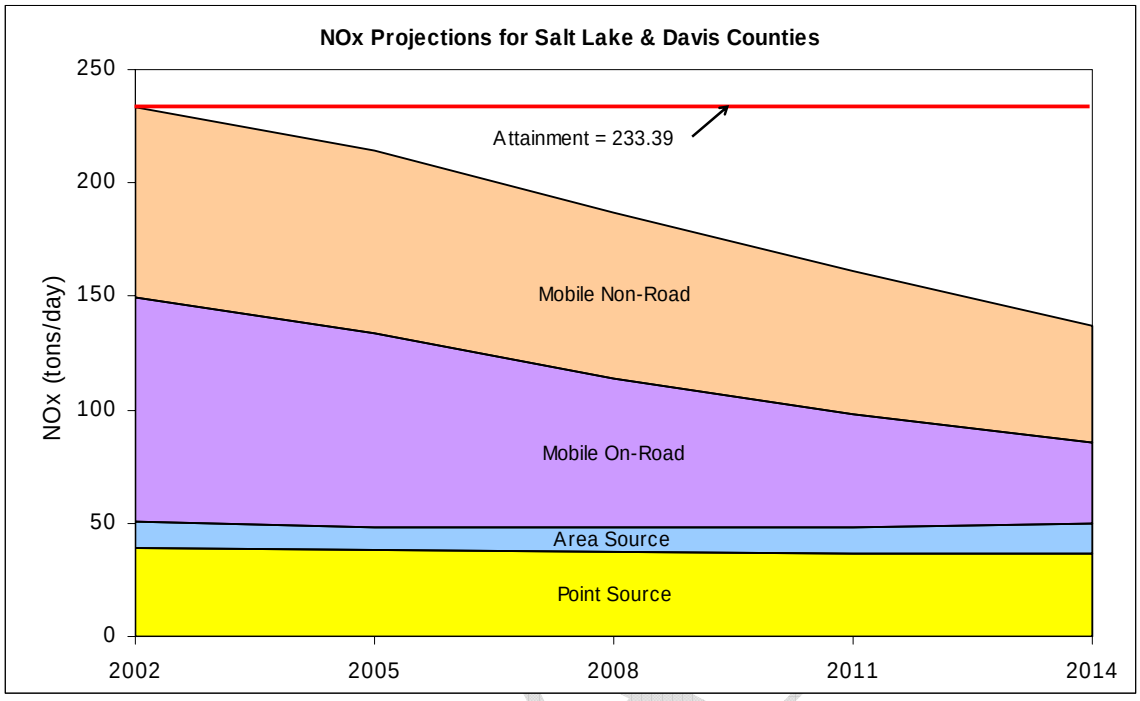
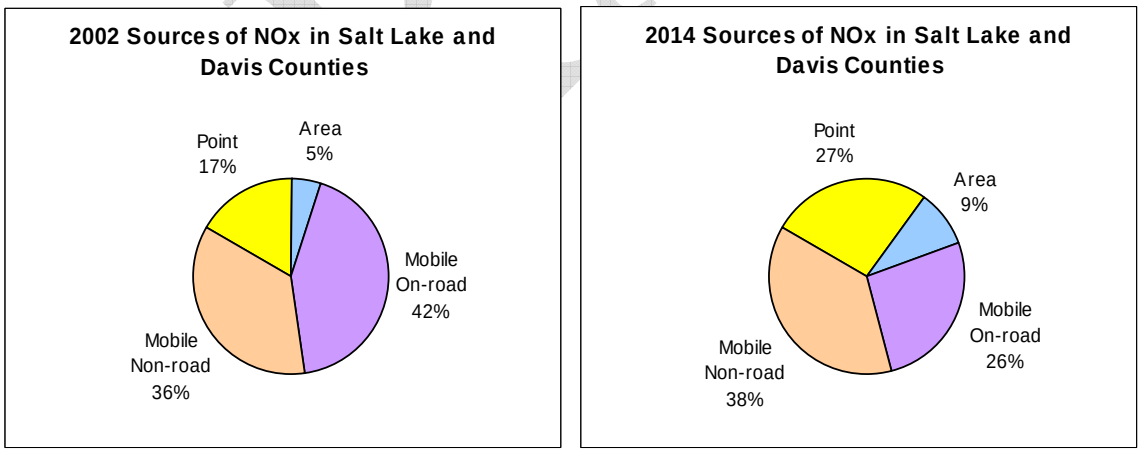


Figure 6. Salt Lake and Davis Counties 2002 and 2014 NO_x Sources



The Utah DAQ will track the progress of this maintenance plan by periodically reviewing future emission inventories to verify that emission levels of VOC and NO_x do not surpass those presented in Subsection 2 above.

A short discussion of how emissions were projected for each of the major source categories follows. Additional discussion is provided in the Emission Inventory section of the TSD.

b. Methodology for Projecting Emissions

(1) Point Sources. Employment growth factors published by the Demographic and Economic Analysis section of the Governor's Office of Planning and Budget were used to project point source emissions.

The point source attainment year inventory contains a listing of emissions by individual sources that compose each plant's actual emissions. The reliability of these projections is reinforced by the continued maintenance of existing rules (R307-325 through 342) that regulate the operations of all VOC sources in Salt Lake and Davis Counties. The New Source Review (NSR) rules that specify pollution control requirements for any new sources or modifications to existing sources also reinforce the reliability of this emission projection inventory.

(2) Area Sources. Growth factors for estimating end projection year emissions for area sources were based on the most recent population and sector-specific employment growth data published by the Governor's Office of Planning and Budget.

(3) Mobile Sources. Projected mobile source emissions were broken down into on-road and non-road categories described below.

(a) On-Road Emissions. Projected on-road emissions for future years are generated by combining VOC and NO_x emission factors with projections of average summer weekday vehicle miles traveled (VMT) within Salt Lake and Davis Counties. VMT projections are obtained from the WFRC Travel Demand Model.

(b) Non-Road Emissions. Projected non-road emissions were broken down into railroad engines, aircraft engines, and miscellaneous non-road equipment categories as described below.

(i) Railroad Engines. Growth factors for estimating projection year emissions are based on industrial employment growth derived from the Governor's Office of Planning and Budget. Emissions were estimated to increase at the rate of employment growth within the Transportation, Communications, and Public Utilities segments of industry.

(ii) Aircraft Engines. Growth figures for all aircraft emissions in Salt Lake and Davis Counties were provided by the Wasatch Front Regional Council (WFRC). These growth figures are applied to the daily emissions calculated in the 2002 attainment inventory to obtain emissions projections through 2014.

(iii) Miscellaneous Non-Road Equipment. EPA's NONROAD version 2004 software was run for all projection years.

(4) Biogenic Emissions. Biogenic emissions will remain constant in Salt Lake and Davis Counties unless significant changes occur in land use, which is not anticipated. The typical summer day emissions were calculated by taking the average of June, July, and August total emissions.

4. Monitoring Network/Demonstration of Continued Attainment

Requirement related to Ozone Monitoring:

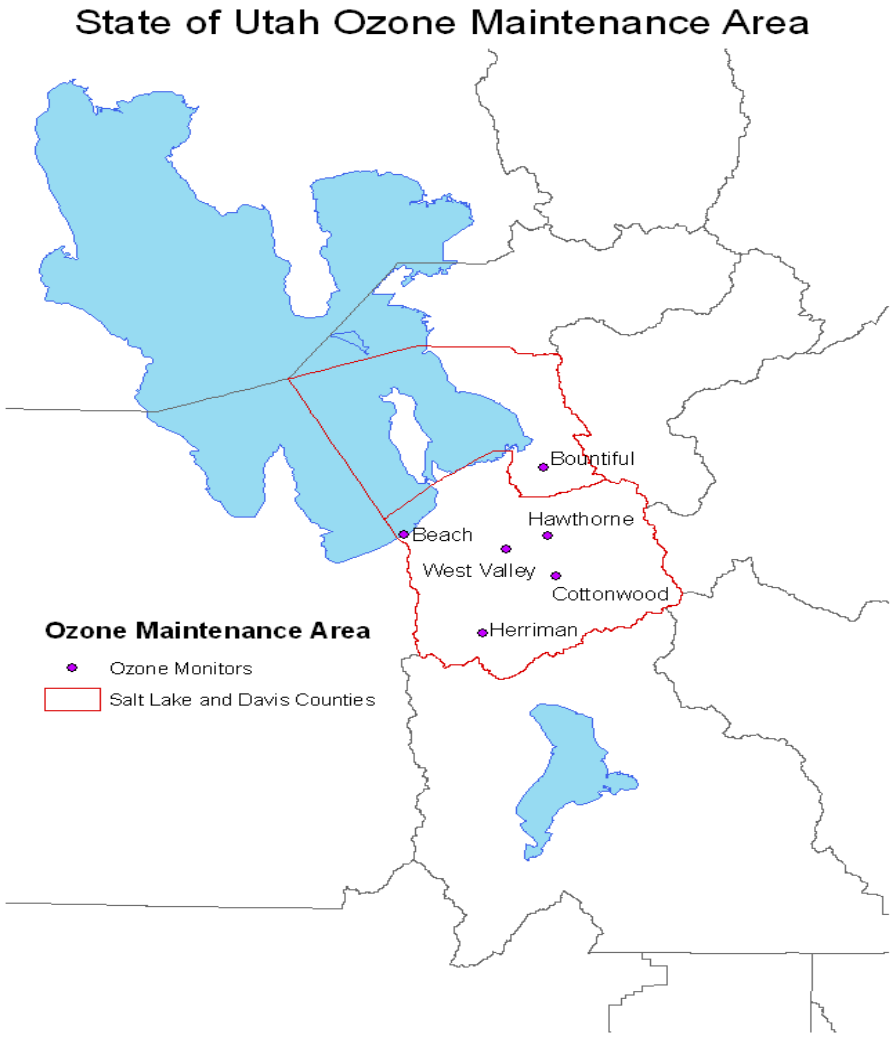
- *Three consecutive years of Ozone monitoring data must show that violations of the standard have not occurred. The standard is the annual fourth-highest daily maximum 8-hour ozone concentration, expressed in parts per million, averaged over three years. Thus the three-year average of the annual fourth-highest daily 8-hour average ozone concentration must not exceed 0.08 ppm to meet the standard. Due to rounding conventions, the fourth-highest daily 8-hour average ozone concentration may not exceed 0.084 ppm.*

a. Ozone Monitoring Network

Information regarding ozone monitoring in Utah is included in the Monitoring Network Review (MNR). Since the early 1980s the MNR has been updated annually and submitted to the EPA for approval. EPA personnel have concurred with the annual network reviews and agreed that the network is adequate. They have also visited the monitoring sites on several occasions to verify compliance with federal siting requirements. The ozone monitoring season in Utah is May through September (40 CFR Part 58, Appendix D, 2.5). The highest ozone values usually occur during the months of June, July and August.

The valley setting of Salt Lake and Davis Counties complicates ozone monitoring of the major urban area along the Wasatch Front. Typical ozone monitoring at sites on flat terrain in wide-open spaces find the peak ozone monitoring station located 5 – 7 hours down wind from the urban area. Because Salt Lake and Davis Counties have a large body of water on their west side (Great Salt Lake) and a major mountain range (Wasatch) on their east side, summer wind patterns result in a diurnal on-shore/off-shore wind flow. This pattern suggests that after 5 – 7 hours the polluted air mass may in fact return to the urban area where the ozone precursors originated. Figure 7 depicts the relative locations of the ozone-monitoring network within Salt Lake and Davis Counties.

Figure 7. Ozone Monitoring Network within Salt Lake and Davis Counties



The following ozone monitoring stations were operating in Salt Lake and Davis Counties during the period 1999 through 2005. Pertinent ozone monitoring station data is delineated below with additional information in the TSD.

Beach (AIRS ID #49-035-2004). This site is located at the Great Salt Lake Marina close to the western border of Salt Lake County. The site has been in existence for many years to measure PM_{10} and SO_2. Ozone monitoring equipment was added to the site as a result of an ozone saturation study that showed high concentrations of ozone in this area. The ozone monitoring equipment began operating on May 17, 1994.

Bountiful (AIRS ID # 49-011-0004). In the city of Bountiful in Davis County, ozone has been measured at two different locations since February of 1975. On July 22, 2003 the

monitoring station was moved approximately three-quarters of a mile north to the current location at 171 West 1370 North on the grounds of Viewmont High School. The move was necessitated by the construction of a new city fire station on the original site. The new site is in a similar residential setting, centrally located and representative of a large part of the city of Bountiful.

Cottonwood (AIRS ID # 49-035-0003). Based on wind trajectories this site was determined to be the site that would measure the maximum ozone concentration in the Salt Lake area. It is located in a residential area approximately nine miles south of the Central Business District. Monitoring began at this site in December of 1980.

Hawthorne (AIRS ID # 49-035-3006). This site is located in a residential area near downtown Salt Lake City. It is representative of a large part of Salt Lake City. Monitoring began at this site on January 1, 1997.

Herriman (AIRS ID #49-035-3008). This site is located in the southwest corner of the Salt Lake Valley in a predominantly rural area. The site was added as a result of a 1993 ozone saturation study that showed high concentrations of ozone in this area. The ozone monitoring equipment began operating on May 1, 1994.

West Valley (AIRS ID # 49-35-3007). West Valley City is the second largest city in the State of Utah and is located in the north central area of the Salt Lake valley. This site was chosen to determine ozone concentrations in an area where a large percentage of the population is clustered. Monitoring at this site began on January 21, 1999.

b. Ozone Monitoring Data

Table 3 represents monitoring data for the Salt Lake and Davis County monitoring sites. For each site, the 4th maximum 8-hour ozone concentration along with the three-year average of the 4th maximum ozone concentration is presented.

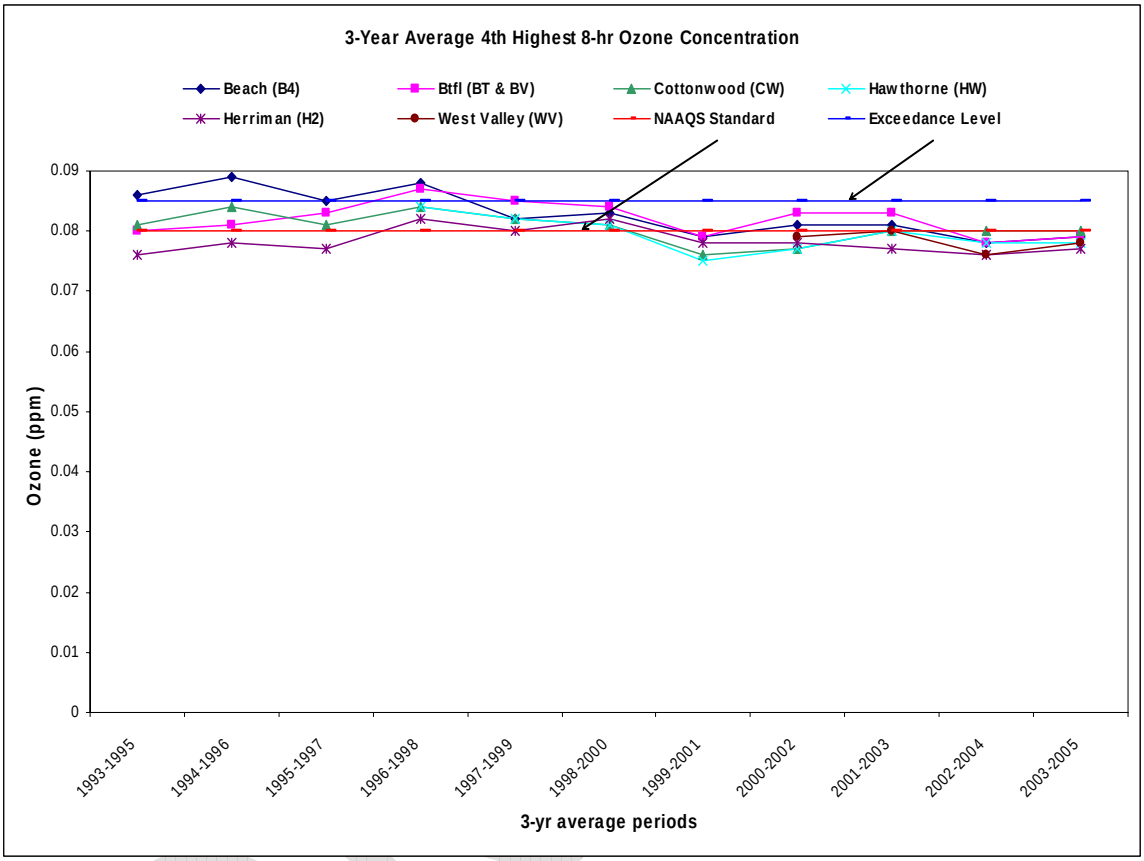
Table 3. Salt Lake and Davis Counties Individual Monitor 4th Highest Ozone and Three-Year Average 4th Highest Ozone Values* (ppm)

Monitoring Site	2000	2001	2002	2003	2004	2005	2000-02 8 hr avg	2001-03 8-hr avg	2002-04 8-hr avg	2003-05 8-hr avg
Beach	0.078	0.082	0.083	0.077	0.075	**0.086**	0.081	0.081	0.078	0.079
Bountiful	0.078	0.081	**0.089**	0.079	0.067	**0.092**	0.083	0.083	0.078	0.079
Cottonwood	0.072	0.076	0.082	0.083	0.074	0.084	0.077	0.080	0.080	0.080
Hawthorne	0.073	0.075	0.084	0.081	0.069	0.083	0.077	0.080	0.078	0.078
Herriman	0.081	0.076	0.078	0.076	0.074	0.080	0.078	0.077	0.076	0.077
West Valley	0.074	0.084	0.079	0.078	0.071	**0.085**	0.079	0.080	0.076	0.078
Avg 4th High	0.076	0.079	0.083	0.079	0.072	**0.085**	0.079	0.080	0.078	0.079

** **Bold** values represent exceedance of National Ambient Air Quality Standard*

Figure 8 depicts the three-year 4th highest ozone concentration average trend since the 1993-1995 periods.

Figure 8. Three-Year Period Ozone Averages (1993-2005)



c. Review of Monitoring Network

The existing monitoring network for ozone consists of thirteen monitoring sites located primarily in the populated counties along the Wasatch Front. DAQ considers the present configuration appropriate to reflect the current source and population areas in Salt Lake and Davis Counties. The DAQ will gain EPA approval before making any changes to the current monitoring network configuration. The DAQ will continue to operate and maintain an adequate air quality monitoring network in accordance with 40 CFR 58, *Ambient Air Quality Surveillance*, to verify the continued attainment of the 8-hour ozone NAAQS. The DAQ will continue to conduct annual reviews of the ozone monitoring network in accordance with 40 CFR 58.20(d) to determine whether the system continues to meet the monitoring objectives presented in Appendix D of 40 CFR Part 58.

5. Existing Regulations and Controls

Requirements relating to existing regulations:

- *Anti-backsliding provisions established in 40 CFR 51.905(a)(4) ensure that emission control strategies that were implemented to address the 1-hour ozone standard are maintained when the area transitions to an 8-hour maintenance plan. The applicable requirements that are listed in 40 CFR 51.900(f) must be maintained, unless the state requests that these obligations be shifted to contingency measures.*

Utah has maintained the requirements in this plan as described below.

a. Reasonably Available Control Technology (RACT)

The State certifies that all existing RACT controls required in the 1981 Ozone SIP and 1-hour maintenance plan dated September 9, 1998, will remain in effect after approval of this SIP revision.

(1) VOC Sources Covered by a CTG issued after 1990 – CAA 182(b)(2).
Negative Declaration - In the 1-hour maintenance plan, Utah determined that there were no VOC sources covered by a Control Technique Guideline (CTG) issued after 1990.

(2) VOC Sources Covered by a CTG issued before 1990. In the 1981 SIP and the 1-hour and Maintenance Plan, dated September 9, 1998, the State of Utah established required controls under Section 182(b)(2) of the CAA. Utah is currently enforcing a set of RACT regulations that are based on CTGs developed by EPA. These state RACT regulations are implemented by the following rules in the Utah Administrative Code.

R307-325	General Requirements
R307-326	Control of Hydrocarbon Emissions in Refineries
R307-327	Petroleum Liquid Storage
R307-328	Gasoline Transfer and Storage
R307-335	Degreasing and Solvent Cleaning Operations
R307-340	Surface Coating Operations
R307-341	Cutback Asphalt
R307-342	Qualifications of Contractors and Test Procedures for Vapor Recovery Systems for Gasoline Delivery Tanks

(3) Major Stationary Sources that are not covered by a CTG. The State of Utah has identified the following major sources (100 t/y or more) of VOC emissions in the Salt Lake and Davis County attainment area. RACT for these major stationary sources that are not covered by specific CTGs or ACTs is listed below. In addition, NO_x emission limitations for most of these major sources are presented in Subsection IX.H.2 of the SIP.

Major Source Name	Type of Source
Chevron	Refinery
Flying J	Refinery
Holly Refining and Marketing (Formerly Phillips)	Refinery
Pioneer Investments	Gasoline Bulk Terminal
Silver Eagle (Formerly Crysen)	Refinery
Tesoro West Coast (Formerly Amoco)	Refinery
Hill Air Force Base	Military Installation

NOTE: *Olympia Sales, which was a major source in the previous 1-hour maintenance plan, is no longer a major source. Its emissions are now covered by the Maximum Achievable Control Technology (MACT) requirements for Wood Furniture (40 CFR 63 Subpart JJ), which is more stringent than RACT.*

(a) Refineries. VOC RACT for the five refineries and one bulk terminal plant located in Salt Lake and Davis Counties is established by R307-326, 327 and 328.

(b) Hill Air Force Base - RACT for Hill Air Force Base is established by a combination of MACT Standards (40 CFR 63), NSPS Standards (40 CFR 60), and operationally-specific-state rules (R307-327, 328, 335 and 340) that currently regulate over eighty-six percent of the total VOC emissions originating from Hill Air Force Base. The remaining fourteen percent of the VOC emissions generated at Hill Air Force Base will be regulated by the forthcoming Military MACT. In addition, VOCs produced by refrigerant processes are controlled by 40 CFR 82 (Stratospheric Ozone).

(4) New Sources of VOC. Any new major or minor source permitted in the future in the ozone maintenance area will be required to meet the Best Available Control Technology (BACT) requirements delineated in R307-401, that will be at least as stringent as RACT.

b. NO_x Requirements under Section 182(f) of the CAA

In the previous 1-hour Maintenance Plan dated September 9, 1998, NO_x RACT requirements for utility boilers were implemented to demonstrate attainment and maintenance of the 1-hour ozone standard. These same requirements remain in place and are valid for the 8-hour standard.

(1) The Gadsby Plant owned by PacifiCorp underwent a RACT determination in 1990 as part of the SIP for particulate matter less than ten microns (PM_{10}) and is currently regulated under Section IX Part H of the SIP. Under that determination the facility was required to switch fuel from coal to natural gas and to use low NO_x burner technology. As a result, this facility is now operating within regulated limits specified in Section IX, Part H of the SIP.

(2) The Utah Power Plant owned and operated by Kennecott Utah Copper (KUC) underwent a RACT determination in 1995. KUC installed low NO_x burners, which meet an emission limitation of 216 lb/hr, and 426.5 ppmdv (measured at 3 percent oxygen). This is equivalent to 0.50 lb NO_x/mmbtu. This was determined as RACT effective May 31, 1995.

c. Rate of Progress (ROP) Reductions.

The ROP requirements in section 182(b)(1) do not apply because EPA determined that Salt Lake and Davis Counties attained the ozone standard on July 18, 1995 (60 FR 36723).

d. Inspection and Maintenance (I/M) Programs

The previous 1-hour maintenance plan, dated September 9, 1998, stated that Salt Lake and Davis Counties had finalized the details of the improvements that would be included in the new I/M programs. The new programs became effective in Davis County in 1998 and Salt Lake County in 2000. The standards for each county are different due to varying test procedures and average vehicle speeds.

The current performance standards are based on MOBILE6 modeling of the current I/M and anti-tampering programs. The MOBILE6 I/M performance standards for Salt Lake and Davis Counties are presented in Tables 4 and 5. Additional information regarding I/M Program Performance Standards is included in the TSD.

Table 4. Salt Lake Co. – I/M Performance Standard
(Emission Factors in grams/mile @ 30.8 mph)

Pollutant	2002	2005	2008	2011	2014
VOC	1.28	0.91	0.65	0.48	0.37
NO_x	1.22	1.01	0.67	0.47	0.34

Table 5. Davis Co. – I/M Performance Standard
(Emission Factors in grams/mile @ 36.6 mph)

Pollutant	2002	2005	2008	2011	2014
VOC	1.43	1.04	0.78	0.63	0.49
NO_x	1.30	1.06	0.73	0.55	0.40

e. Major Source Applicability Cut-offs for Purposes of RACT

Cut-offs for major sources of VOC in the Salt Lake and Davis County attainment area are identified in Subsection a(3) above. RACT requirements for these sources are in effect as defined therein.

f. Requirements that Do Not Apply

The following requirements of 40 CFR 51.900(f) apply to serious, severe, and extreme ozone nonattainment areas. They do not apply to the Salt Lake/Davis County area because it was

originally designated as a moderate nonattainment area. Thus, the anti-backsliding provisions do not apply.

- Stage II Vapor Recovery
- Clean Fuels Fleet Program under § 182(e)(3) of the CAA
- Clean fuels for boilers under § 182(e)(3) of the CAA
- Transportation Control Measures (TCMs) during heavy traffic hours as provided under § 182(e)(4) of the CAA
- Enhanced (ambient) monitoring under § 182(c)(1) of the CAA
- Transportation controls under §182(c)(5) of the CAA
- Vehicle miles traveled provisions under §182(d)(1) of the CAA

g. Control Measure Carried Forward from the 1-hour Ozone Plan

The employer-based trip reduction program is included in the 1-hour maintenance plan, though no credit is claimed, to reduce measurable miles driven by employees commuting to and from work. It emphasizes numerous measures to reduce the drive-alone rate, including subsidized bus passes, carpooling, telecommuting, and flexible work schedules. R307-320 is the State rule that implements this program for all Federal, State and local government agencies in Salt Lake and Davis Counties with 100 or more employees at a worksite. This program is used by government agencies including public universities and school districts. It has proven to be a popular program and is retained as a control measure in this 8-hour plan.

6. Contingency Measures

Requirements relating to Contingency Planning:

- *The State must develop a contingency plan that, at a minimum, will ensure that any violation of the 8-hour ozone NAAQS is promptly corrected. The plan should clearly identify the measures to be adopted, a schedule and procedure for adoption and implementation, and a specific time limit for action by the State. The schedule for adoption and implementation should be as expeditious as possible, but no longer than twenty-four months.*

a. Purpose of Contingency Planning

Section 110(a)(1) of the CAA and 40 CFR Part 51, *Requirements For Preparation, Adoption, and Submittal of Implementation Plans*, Subpart X, require the State to develop a maintenance plan that contains contingency provisions to ensure that any violation of the ozone NAAQS that may occur in the Salt Lake/Davis County area will be promptly corrected. Under the current 8-hour NAAQS, attainment areas are not necessarily required to have pre-selected contingency provisions, but rather a listing of measures that could be considered for future implementation, should they become necessary. The purpose of these controls in attainment areas is to achieve sufficient VOC and/or NO_x emission reductions to eliminate ozone violations, or to offset increases in VOC or NO_x emissions that might threaten the ozone standard. Implementing controls in response to ozone violations in attainment areas may occur without federal redesignation of an area to non-attainment.

When considering potential control measures, several factors were taken into consideration. Some controls interact with other controls, thereby decreasing overall effectiveness. For example, in the case of NO_x emissions, it has been found that reducing them under certain conditions may actually increase the development of ozone because NO_x can function as a scavenger of ozone. Major considerations that need to be considered in the choosing of viable control strategies are cost effectiveness, actual realized reductions with minimal lead time, and the overall benefit of the controls.

b. Determination of the Contingency Trigger Level and Date

It is the intent of the DAQ to periodically review the ambient monitoring data, emission inventories, growth projections, and other relevant data to determine whether contingency measures delineated in this plan should be implemented to maintain the 8-hour ozone standard. The Air Quality Board currently reviews monthly monitoring data at regularly scheduled meetings. As in the past, the AQB may implement contingency measures proactively to avoid a violation. In 1999, the board implemented a number of voluntary measures and state-only rules that helped the area to attain the 8-hour standard and be designated attainment.

If monitoring values are high enough to cause a violation of the current ozone standard, the DAQ, in consultation with EPA, will evaluate contingency measures and recommend those measures that would be most effective to correct the exceedance to the AQB. An action by the AQB will

function as the official triggering mechanism to activate any control measure. The date that the AQB determines that one or more contingency or control measures should be implemented will be the contingency trigger date.

c. Timeliness of Contingency Actions

The maintenance plan must also ensure that the contingency provisions are adopted expeditiously once a need is determined. The State will normally have an appropriate amount of time to correct a violation by implementing one or more of the contingency measures as necessary. In the event that violations continue to occur after contingency measures have been implemented, additional contingency measures would be implemented until the violations are corrected and the area has returned to ambient concentration levels meeting the NAAQS.

As specified in (b) above, the date that the AQB determines that one or more contingency measures should be implemented will be considered the contingency trigger date. Within 60 days of the contingency trigger date, DAQ will begin evaluation of potential contingency measures. Within 180 days of the trigger date, DAQ will present the recommended contingency measure to the AQB. The AQB will then direct public hearings to consider the recommended contingency measures along with any other contingency measures the Board believes may be appropriate to effectively address the problem. Unless otherwise directed, the necessary contingency measures will be adopted and implemented within eighteen months of the trigger date.

d. Possible Contingency Measures

One or more of the following measures will be evaluated for implementation if the conditions in Subsection b. above occur. Measures will be chosen based on the specific needs of the violating area, and their capacity to bring the area back into compliance quickly. It is likely that no federal money will be available to fund the implementation of the selected control measures. Most, if not all, of the costs involved will be assumed by local citizens, local industries, and state government agencies. These control measures are not listed in any order of preference.

- *Alert Day Enhancements* - DAQ could expand the "Choose Clean Air" campaign, a program designed to help individuals improve air quality by making smart choices. The program would discourage the refueling of on-road vehicles during peak periods of ozone formation by creating incentives to refuel later in the day. The program would also include a voluntary restriction of the use of gasoline powered small engines during the hottest period of the day.

- *Reduction of Truck Stop Idling* - This is a strategy that has been suggested at the national level as a major environmental and energy issue. Truckers often stop to rest, but leave their engines running for a variety of reasons. The US Department of Energy is considering a model rule that would set uniform idling standards by encouraging truck stop electrification. This would allow truck drivers to "plug in" to keep accessories going while shutting down their engines. Utah could adopt a rule limiting vehicle idling time while vehicles are not actually moving. This could significantly reduce the amount of several criteria pollutants being released to the atmosphere and at the same time reduce fuel waste.

- *Heavy Equipment Emission Control Program* - Institute an emission reduction program for heavy construction equipment, school busses, and Utah Transit Authority (UTA) vehicles. This could include incentives to encourage after-market retrofit of heavy-duty diesel construction equipment and increased use of compressed natural gas fueled school and UTA busses.

- *Reduce Emissions of VOCs* - Request voluntary commitments or enact measures to reduce or restrict the release of VOCs from major sources during periods of peak ozone formation. This could include industrial sources both within and outside the ozone maintenance area whose pollutants may be transported into the maintenance area by local wind patterns or meteorological processes. This could also include refineries, waste water treatment facilities, chemical plants, and large painting operations that emit most of their pollutants or precursors during the hottest time of the day.

- *Identification of High-Polluting Vehicles* - Use remote sensing technology to identify smoking and high-emitting vehicles that contribute a disproportionate amount of emissions. This technology is available and was recently used in Cache County to identify high polluting vehicles during the winter inversion season. Provide a monetary incentive program to encourage repair of these vehicles at participating repair shops.

- *Establish an Offset Ratio for NO_x* - R307-420 maintains the offset provisions of the new source review program in Salt Lake and Davis Counties. This offset program addresses growth in ozone precursors that are not adequately addressed in the current models used for permitting under the Prevention of Significant Deterioration (PSD) program. In 1999 the emissions thresholds were lowered for VOC. The thresholds could be lowered for NO_x to further limit NO_x from new sources.

- *Implement More Effective Low-NOx Burner Controls* – Existing sources in Salt Lake and Davis Counties could be required to replace existing burners with low-NO_x burners.

- Other VOC or NO_x emission control measures appropriate for the area based on consideration of cost-effectiveness, emission reduction potential, social and economic considerations, or other factors that the AQB may deem appropriate. It is understood that new control measures may be developed in the future that could have large impacts on emissions.

7. Verification of Continued Ozone Maintenance

Requirements relating to Verification of Continued Attainment:

- *The Maintenance Plan should indicate how the state will track the progress of the Maintenance Plan.*

a. Tracking System for the Verification of the Emission Inventory

Continued maintenance of the 8-hour ozone standard in Salt Lake and Davis Counties depends upon the ability of the State to track VOC and NO_x emissions in future years. This is necessary due to the fact that emissions projections made for the maintenance demonstration included in this plan depend on assumptions of point, area, and mobile source growth. To verify continued maintenance, the State will periodically update the VOC and NO_x emission inventories for Salt Lake and Davis Counties. This updated emission inventory will be compared to the projections contained in this plan to verify that they are within acceptable limits to maintain the ozone standard.

b. Provisions for Revising the Maintenance Plan

As stipulated in Section 110(a)(2)(H) of the CAA, the State agrees to provide for review of this maintenance plan and submission of a revised maintenance plan, if necessary. It is understood that maintenance plans approved under section 110(a)(1) remain in effect for 10 years and are not required to be adopted for a second ten-year period. It is further understood that contingency measures approved as part of 110(a)(1) maintenance plans will remain in effect and that the contingency measures could still be triggered if an area violates the 8-hour standard after the initial 10-year period.

c. Provisions for Prohibiting Transport of Emissions to Other States

If it is determined that emissions generated within the State of Utah interfere with attainment or maintenance of a NAAQS in another state, DAQ will take steps, as necessary, to reduce those emissions.

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UTAH STATE IMPLEMENTATION PLAN

CONTROL MEASURES FOR AREA AND POINT SOURCES

OZONE

SECTION IX PART D

IX.D.1 Implementation Plan

IX.D.l.a Nonattainment Areas

In accordance with the requirements of Section 107, Clean Air Act as amended August 1977, the Wasatch Front Intrastate Air Quality Control Region comprised of Davis, Salt Lake, Utah, and Weber Counties was designated as a nonattainment area for ozone. On August 18, 1981 the EPA redesignated Utah and Weber Counties as attainment areas for ozone based on ambient air data collected by the state which demonstrated attainment of the ozone standard.

IX.D.1.b Ozone Concentrations and Data Analysis

(1) Concentrations

Ozone is not directly emitted, but results primarily from the interaction of hydrocarbons and oxides of nitrogen in the presence of sunlight. In 1980, the number of ozone monitoring sites in the Salt Lake/Davis County area was increased from two to six. Prior to l98l there had been very little monitoring of hydrocarbons in the Salt Lake/Davis County area. In the summer of l98l, two temporary hydrocarbon monitoring sites were established - one in downtown Salt Lake City and the other in southern Davis County in an area near several oil refineries.

During l98l the primary National Ambient Air Quality Standard for ozone was exceeded on thirteen separate days. Figure IX.D.1 shows the dates of exceedence, the locations, and the measured values for the years 1979, 1980, and 1981.

Figure IX.D.1*
EXCEEDENCES OF .l2 PPM OZONE STANDARD IN l98l

	Date	Day of Week	Site	Hour	Peak Value (ppm)
l.	July 22	Wed	B	l2-l3	.l63
			F	l2-l3	.l25
2.	July 28	Tue	B	l2-l3	.l55

* B = Bountiful C = Cottonwood
F = Farmington R = West Ranch
S = Salt Lake City

To Be Deleted

	Date	Day of Week	Site	Hour	Peak Value (ppm)
3.	July 4	Sat	S	l2-l3	.l47
4.	June 29	Mon	C	l5-l6	.l38
			S	l3-l4	.128
5.	June 30	Tue	R	l4-l5	.l35
			F	l4-l5	.l25
6.	May l	Fri	B	l3-l4	.l33
7.	July 5	Sun	F	l4-l5	.l32
			B	l4-l5	.l28
8.	Aug l8	Tue	B	l3-l4	.l3l
9.	July 2l	Tue	F	l3-l4	.l30
			B	l3-l4	.l28
l0.	July 23	Thur	B	l2-l4	.l25
ll.	July l6	Thur	F	l4-l5	.l25
l2.	July 9	Thur	F	ll-l2	.l25
l3.	Aug 5	Wed	F	l2-l3	.l25

EXCEEDENCES OF THE .12 PPM OZONE STANDARD IN 1980

l.	July 22	Tue	S	l2-l3	.l82
2.	Aug. ll	Mon	B	l3-l4	.l78
			F	l4-l5	.l62
3.	July l8	Fri	S	l3-l4	.l7l
4.	July l6	Wed	S	l4-l5	.l69
5.	July 28	Mon	B	l3-l4	.l64
			S	l4-l5	.l40
6.	June 28	Sat	S	l6-l7	.l55
7.	Sept. 5	Fri	S	l2-l3	.l46
			F	l5-l6	.l30
8.	June l7	Tue	S	l4-l5	.l46
9.	July 2l	Mon	S	l2-l3	.l45
l0.	Aug. 8	Fri	S	l5-l6	.l36
ll.	July 30	Wed	S	l4-l5	.l25
l2.	June 9	Mon	S	l4-l5	.l25

EXCEEDENCES OF THE .12 PPM OZONE STANDARD IN 1979

l.	June 28	Thur	B	l4-l5	.l90
			S	l6-l7	.l49
2.	Sept. 5	Wed	B	l4-l5	.l54
			S	l6-l7	.l40

* B = Bountiful C = Cottonwood

F = Farmington
S = Salt Lake City
R = West Ranch

	Date	Day of Week	Site	Hour	Peak Value (ppm)
3.	June 24	Sun	B	l4-l5	.l4l
4.	July 20	Fri	B	l3-l4	.l38
5.	Aug. 3	Fri	B	l2-l3	.l37
6.	Oct. l0	Wed	S	l4-l5	.l32
7.	July l6	Mon	S	l4-l5	.l32
			B	l3-l4	.l25
8.	Aug. l	Wed	B	l2-l3	.l3l
9.	July l5	Sun	B	l3-l4	.l29
l0.	Aug. 4	Sat	B	l2-l3	.l25
ll.	June l6	Sat	B	l5-l6	.l25

* B = Bountiful
C = Cottonwood
F = Farmington
R = West Ranch
S = Salt Lake City

(2) Data Analysis

Two different analytical approaches were used in an effort to define the extent of the ozone problem and to predict the hydrocarbon emission reduction necessary to attain the ozone standard. The city specific EKMA procedure developed by EPA was applied using locally developed emissions inventories, meteorological parameters, and hydrocarbon (HC) / oxides of nitrogen (NO_x) data. This method predicted that a 29% reduction in l980 hydrocarbon emissions is necessary to achieve the ozone standard.

In the second method, a determination was made of the meteorological conditions which contribute to high ozone formation in the Salt Lake/Davis County area. A linear relationship was observed between the hydrocarbon concentrations measured during the morning hours and peak ozone concentrations measured in the afternoon on days in which meteorological conditions conducive to ozone formation existed. This method predicted that a 32% reduction in l98l hydrocarbon emissions is necessary to achieve the ozone standard.

The reduction requirements predicted by both methods are consistent with hydrocarbon reduction requirements predicted in other states where ozone problems similar to Utah's exist. The technical support document for this section of the SIP contains the details of the analysis and a summary of an informal survey of the hydrocarbon reduction requirements necessary in other states.

IX.D.1.c Emission Inventories

In total, five HC/NO_x emission inventories were prepared. The inventories were based on

control strategies currently being implemented and growth projection for both counties. The inventories include actual emissions of HC/NO_x in 1980 and projected emissions of HC/NO_x in 1987. The inventories are designed to represent HC/NO_x emissions typical of a summer weekday. The five inventories which were prepared are as follows:

1) Salt Lake/Davis County Combined HC/NO_x Inventory (Figure IX.D.2).
2) Salt Lake County HC/NO_x Inventory (Figure IX.D.3).
3) Davis County HC/NO_x Inventory (Figure IX.D.4).
4) Salt Lake City Urban Core Inventory (Figure IX.D.5).
5) Petroleum Refinery, Storage, and Distribution Inventory (Figure IX.D.6).

The Salt Lake City Urban Core and the Petroleum Refinery Storage and Distribution Inventories were determined by the state to be most appropriate for use in development of this SIP.

A growth rate equivalent to 1% in the Urban Core was used in development of this SIP. No growth was predicted for the petroleum refinery area (see technical support document for growth rate rationales).

IX.D.1.d. Control Strategy

During the development of the 1979 SIP, a thorough review was made of all Control Techniques Guidance documents (CTG) developed for EPA. Those strategies contained in the CTG which were determined by the Utah Air Conservation Committee to be applicable were adopted. As Group III CTG Documents are made available from EPA, they will be reviewed and adopted in the state as the Air Conservation Committee determines appropriate. Reasonably Available Control Technology requirements were applied to all point sources and are currently being implemented. Application of these strategies will reduce hydrocarbon emissions to levels necessary to meet the NAAQS for ozone by November 1, 1985. The following is a list of applicable mobile and point source control strategies:

- Federal Motor Vehicle Control Program (FMVCP)
- Automobile Inspection and Maintenance (I/M)
- Transportation Control Measures (TCM)
- Reasonably Available Control Technology (RACT)

The FMVCP, I/M, and TCM were described in Section IX.C.4. In terms of hydrocarbon reductions, these strategies will achieve the following by 1984:

FMVCP - Under this program, as the older vehicles are replaced by newer vehicles with better controls, the emissions per vehicle mile will be reduced from 5.59 gms to 3.50 gms which represents a 37.4% reduction from l980 to l984. This program will reduce emissions in the urban core by 25.3%.

TCM - Reductions due to transit improvements are included in the FMVCP reductions. Urban core HC emissions will be reduced by 0.2% with the implementation of the

TCM developed by the Wasatch Front Regional Council in their document "Traffic Control Measures for the Wasatch Front Region" in January, 1982 which is summarized in Section XI, Appendix 2.

I/M - Under the authority granted them by Sections 41-6-163.(5) and (6), Salt Lake and Davis Counties have developed implementation schedules and enforcement procedures for I/M programs in their counties. Both programs are designed to reduce automobile HC emissions by 25%. Salt Lake County's regulations are contained in Section X, Appendix 7. Davis County's ordinance is contained in Section X, Appendix 6. Both I/M programs will be fully implemented by April 1, 1984, and are predicted to reduce urban core emissions by 4.3%.

Figure IX.D.2
SALT LAKE - DAVIS COUNTIES COMBINED
HYDROCARBON AND NOx EMISSIONS INVENTORY

	Hydrocarbons			NOx	
	1980	1987 No I/M	1987 I/M	1980	1987
	Kg/day	Kg/day	Kg/day	Kg/day	Kg/day
I. Local Data Collected					
A. Highway Vehicles	77,220	43,614	36,516	50,110	53,380
B. Major Point Sources	25,584	7,141	7,141	34,186	38,266
C. Aircraft	2,560	2,915	2,915	1,796	2,440
D. Gasoline distribution Losses	10,692	7,560	7,560	--	--
E. Railroads	651	651	651	2,567	2,567
F. Forest fires	1,966	1,966	1,966	329	329
G. Cutback Asphalt	245	--	--	--	--
H. Area Combustion Process Nat Gas	79	93	93	4,908	5,778
SUBTOTAL	118,998	63,940	56,842	93,896	102,760
II. Per Capita Emissions					
A. Commercial/Consumer Use	6,000				
B. Architectural Surface Coating	4,379				
C. Degreasing	2,857				
D. Automobile Refinishing	1,806				
E. Dry Cleaning	1,424				
F. Graphic Arts	763				
SUBTOTAL	17,229	17,229	17,229	--	--
III. Per Employee Estimates					
A. Furniture and Fixture Mfg.	623				
B. Rubber and Plastic Prod. Mfg	579				
C. Timber and Wood Products	412				
SUBTOTAL	1,614	1,614	1,614	--	--
IV. Apportionment of National Usage					

To Be Deleted

A. Construction Vehicles	1,151	1,361	1,361	15,980	18,912
B. Lawn and Garden Use	2,054	2,430	2,430	245	289
C. Industrial Vehicles	854	1,001	1,001	2,302	2,702
D. Off-Highway Motorcycles	118	140	140	7	9
E. Farm Use	128	107	107	271	230
SUBTOTAL	4,305	5,039	5,039	18,805	22,142
TOTAL	142,146	87,822	80,724	112,701	124,902
		- 38.2%	- 43.2%		+10.8%

Figure IX.D.3
SALT LAKE COUNTY HYDROCARBON AND NOx
EMISSIONS INVENTORY

	Hydrocarbons			NOx	
	1980	1987 No I/M	1987 I/M	1980	1987
	Kg/day	Kg/day	Kg/day	Kg/day	Kg/day
I. Local Data Collected					
A. Highway Vehicles	62,800	35,560	29,860	40,260	42,880
B. Major Point Sources	6,898	2,129	2,129	26,739	30,819
C. Aircraft	2,550	2,903	2,903	1,795	2,439
D. Gasoline distribution Losses	8,642	6,110	6,110	--	--
E. Railroads	416	416	416	1,641	1,641
F. Forest fires	1,629	1,629	1,629	274	274
G. Cutback Asphalt	194	--	--	--	--
H. Area Combustion Process Nat Gas	66	77	77	4,251	4,948
SUBTOTAL	83,195	48,824	43,124	74,960	83,001
II. Per Capita Emissions					
A. Commercial/Consumer Use	4,850				
B. Architectural Surface Coating	3,540				
C. Degreasing	2,310				
D. Automobile Refinishing	1,460				
E. Dry Cleaning	1,150				
F. Graphic Arts	617				
SUBTOTAL	13,927	13,927	13,927	--	--
III. Per Employee Estimates					
A. Furniture and Fixture Mfg.	503				
B. Rubber and Plastic Prod. Mfg	468				
C. Timber and Wood Products	333				

To Be Deleted

SUBTOTAL	1,304	1,304	1,304	--	--
IV. Apportionment of National Usage					
A. Construction Vehicles	929	1,081	1,001	12,900	15,020
B. Lawn and Garden Use	1,660	1,932	1,932	198	230
C. Industrial Vehicles	768	894	894	2,071	2,410
D. Off-Highway Motorcycles	90	105	105	5	6
E. Farm Use	92	79	79	208	181
SUBTOTAL	3,539	4,091	4,091	15,382	17,847
TOTAL	101,965	68,146	62,446	90,342	100,848
		-33.2%	-38.8%		+11.7%

Figure IX.D.4
DAVIS COUNTY HYDROCARBON AND NOx
EMISSIONS INVENTORY

	Hydrocarbons			NOx	
	1980	1987 No I/M	1987 I/M	1980	1987
	Kg/day	Kg/day	Kg/day	Kg/day	Kg/day
I. Local Data Collected					
A. Highway Vehicles	14,420	8,054	6,656	9,850	10,500
B. Major Point Sources	18,687	5,012	5,012	7,447	7,447
C. Aircraft	10	12	12	1	1
D. Gasoline distribution Losses	2,050	1,450	1,450	--	--
E. Railroads	235	235	235	926	926
F. Forest fires	337	337	337	55	55
G. Cutback Asphalt	51	--	--	--	--
H. Area Combustion Process Nat Gas	13	16	16	657	830
SUBTOTAL	35,803	15,116	13,718	18,936	19,759
II. Per Capita Emissions					
A. Commercial/Consumer Use	1,150				
B. Architectural Surface Coating	839				
C. Degreasing	547				
D. Automobile Refinishing	346				
E. Dry Cleaning	274				
F. Graphic Arts	146				
SUBTOTAL	3,302	3,302	3,302	--	--
III. Per Employee Estimates					
A. Furniture and Fixture Mfg.	120				
B. Rubber and Plastic Prod. Mfg	111				

To Be Deleted

C. Timber and Wood Products	79				
SUBTOTAL	310	310	310	--	--
IV. Apportionment of National Usage					
A. Construction Vehicles	222	280	280	3,080	3,892
B. Lawn and Garden Use	394	498	498	47	59
C. Industrial Vehicles	86	107	107	231	292
D. Off-Highway Motorcycles	28	35	35	2	3
E. Farm Use	36	28	28	63	49
SUBTOTAL	766	948	948	3,423	4,295
TOTAL	40,181	19,676	18,278	22,359	24,054
		- 51.0%	- 54.5%		+7.6%

Figure IX.D.5
SALT LAKE CITY URBAN CORE INVENTORY

	Hydrocarbons			NOx	
	1980	1987 No I/M	1987 I/M	1980	1987
	Kg/day	Kg/day	Kg/day	Kg/day	Kg/day
Highway Vehicles	19,610	9,027	7,580	12,390	13,400
Minor Point Sources	523		609	13,610	13,610
Gasoline Dist. Losses	2,276		1,609	--	--
Railroads	208		208	820	820
Cutback Asphalt	51		0	--	--
Area Combustion	17		17	4,251	4,251
Degreasers	608		346	--	--
Dry Cleaners	303		173	--	--
Per Capita Emissions	2,756		2,756	--	--
Per Employee Emissions	687		687	--	--
Construction Vehicles	247		285	3,400	3,950
Lawn and Garden	219		219	198	198
Industrial Vehicles	384		447	1,036	1,205
TOTAL	27,889	16,383	14,936	35,705	37,434
Percent Reduction		-41.3%	-46.4%		-4.8%

Figure IX.D.6

To Be Deleted

PETROLEUM REFINING, STORAGE, AND DISTRIBUTION INVENTORY

	Hydrocarbons (Kg/day)		NOx (Kg/day)	
	1980	1987	1980	1987
Phillips	5,734	854	1,833	1,833
Wesreco	1,860	361	472	472
Husky	1,992	690	549	549
Chevron	7,136	2,390	3,862	3,862
AMOCO	6,028	1,205	1,825	1,825
Caribou	525	77	68	68
Morrison	575	75	34	34
Pioneer	625	326	--	--
Bill roderick	75	35	--	--
Little America	95	77	--	--
Eko Tech	32	32	--	--
TOTALS	24,677	6,122	8,643	8,643
		-75.2%		0%

RACT requires the installation of effective emissions control technology on the major hydrocarbon point sources in the nonattainment area. This strategy will reduce urban core emissions by 4.4% and emissions from the petroleum refinery storage distribution area by 75.2%.

The following subsections describe the controls for which regulatory requirements have been adopted. Details of these strategies are found in the Utah Air Conservation Regulations.

IX.D.1.d(1) Control of Hydrocarbon Emissions in Refineries

Vacuum Producing Systems: Vacuum producing systems attendant to vacuum distillation and other refinery processes are potential sources of volatile organic compound emissions. VOC emissions to the atmosphere are prevented by venting the non-condensable vapors from the blowdown system into the refinery fuel system, a firebox, or incinerator.

Wastewater (Oil/Water Separators): Refinery wastewater drains and treatment facilities are a source of VOC emissions whenever wastewater is exposed to the atmosphere. VOC emissions to the atmosphere are reduced by collecting contaminated wastewater in a closed process drainage system and directing it to a covered oil separator.

Process Unit Turnaround: The procedure of unit shutdown for repair or inspection and the subsequent start-up is termed a unit turnaround. Purging the vapor contents of the vessels is done to provide a safe interior atmosphere for workers. The major potential source of VOC emissions during the purging process is the depressurization of the vessels. Atmospheric emissions of those vapors are reduced by venting emissions to a vapor recovery system, flare, or firebox.

Blowdown System: A refinery blowdown system provides for safe disposal of hydrocarbons (vapor

and liquid) discharged from pressure relief devices. Emissions will be controlled by either 1) venting to a vapor recovery or disposal system or 2) the pressure relief valves will be protected by a rupture disk or maintained by an inspection system approved by the Executive Secretary.

Catalytic Cracking: Flue gas from catalytic cracker catalyst regeneration contains hydrocarbons which will be vented to a wasteheat boiler, a process heater, firebox, or be otherwise incinerated or controlled.

Leaks from Petroleum Refinery Equipment: Leaks from various types of refinery equipment such as pumps, compressors, and valves generate significant amounts of VOC emissions. The Utah Air Conservation Regulations require regular monitoring of equipment which is likely to have leaks and prompt repair of such leaks as they are found.

IX.D.1.d(2) Storage Tanks

The l980 hydrocarbon inventory indicated significant emissions of HC due to storage of petroleum liquids in North Salt Lake and South Davis Counties. Control strategies are being implemented to control VOC emissions from storage tanks.

Control Strategy: VOC emissions from storage tanks is controlled by the installation of internal floating roofs for fixed roof tanks and secondary seals for external floating roof tanks.

Affected Facilities: It is necessary that owners/operators of fixed roof petroleum storage tanks with capacities greater than 40,000 gallons and with stored liquids having a vapor pressure greater than l.52 psia apply floating roofs to such tanks.

The owners/operators of external floating roof welded tanks containing petroleum liquids having a true vapor pressure of 4.0 psia or greater, or external floating roof riveted tanks containing petroleum liquids having a true vapor pressure of 1.5 psia or greater are required to install secondary seals in all such tanks.

IX.D.1.d(3) Tank Truck Gasoline Loading Terminals and Bulk Plants

Tank truck terminals at the oil refineries in South Davis and North Salt Lake Counties are potential major stationary sources of hydrocarbon emissions. Hydrocarbon emissions occur at these terminals when vapors are displaced from tank transport facilities during loading and are vented directly into the atmosphere.

Bulk gasoline loading plants are secondary distribution facilities which receive gasoline from bulk terminals or refineries by trailer transport, store it in above ground storage tanks, and dispense it via account trucks to local farms, businesses, and service stations. At bulk plants, vapors are displaced to the atmosphere from the filling of account trucks and the storage tanks. Additional emissions from the storage tanks are attributed to breathing and storage losses and are addressed in IX.D.4.b.

Control Strategy: Emissions from gasoline terminals and bulk gasoline plants will be controlled by use of vapor balance systems where displaced vapors from account (delivery) trucks are transferred to the storage tanks and subsequently to the transport trucks that deliver gasoline to the bulk plant. Vapors from the transport truck will be collected at the gasoline terminal.

Affected Facilities: In order to control VOC from bulk gasoline plants it is necessary to apply vapor balance systems to storage tanks with an average throughput of l5,000 liters per day (3900 gallons). In order to be effective, the vapor balance system must have the following capabilities:

l) Control VOC displaced by gasoline delivery to the storage tanks (except for those existing storage tanks of less than 2000 gallons capacity), and
2) Control VOC displaced by filling account trucks.

In addition, the account trucks used in connection with the system must be capable of receiving displaced vapors from storage tanks when off- loading at service stations; and the account truck, laden with vapors would only be refilled at an installation equipped with a vapor recovery system or equivalent which recover at least 90% by weight of displaced VOC.

Proper maintenance and operation is required at bulk plants at all times to assure effective collection and vapor tight storage. Tanks and account trucks must be leak tested at least annually.

IX.D.1.d(4) Vapor Control Systems at Gasoline Stations

Hydrocarbon emissions from gasoline service station operations occur primarily when hydrocarbon vapors are displaced from the underground storage tanks during filling and when gasoline is dispensed to vehicle tanks. Regulations now require control during the transfer of fuel to the underground storage tanks.

Control Strategy: The proper use of simple balance systems will control greater than 90% of the hydrocarbon emissions from the filling of underground storage tanks. These systems control emissions from storage tanks during filling by returning displaced vapors to the tank truck.

Affected Facilities: Any stationary storage tank located at a gasoline dispensing facility with a capacity of 7,580 liters (2,000 gallons) or more is required to have installed:

A vapor return line such that vapors displaced from the storage tank during filling are returned to the delivery tank. Delivery tank operators are required to have a vapor return system installed on each delivery tank to insure all gasoline transfer to or from a delivery tank is done in such a manner that displaced vapors are not vented to the atmosphere during transfer operations. In addition, proper maintenance and operation are required to insure efficient collection and that there are no leaks in the system. Frequent visual inspections are required to insure proper operation of manifolding and relief valves. Tank trucks and storage tanks are to be maintained in vapor tight conditions with leak testing conducted at least annually on each tank.

Figure IX.D.7 lists the emissions predicted from the major HC source categories for which control

requirements exist in the Utah Air Conservation Regulations.

Figure IX.D.7

	1980 (reported)	1983 (projected)	1984 (projected)
Refinery	12,693	3,339	2,094
Storage	5,271	3,147	1,023
Loading/Transfer	4,460	752	752
Uncontrolled Emissions	2,253	2,253	2,253
Total	24,677 Kg/day	9,411	6,122 Kg/day
		-61.5%	-75.2%

IX.D.1.d(5) Other Control Techniques

In addition to the strategies contained in Sections IX.D.1.d(1) - (4), several other guidance documents were reviewed in an effort to plan reductions of hydrocarbon emissions along the Wasatch Front. Specifically the following areas were reviewed: Control of volatile organic emissions (VOC) from (l) Surface coating of large appliances, (2) Surface coating for insulation of magnet wire, (3) Surface coating of metal furniture, and (4) Surface coating of cans, coils, paper, fabrics, automobiles, and light duty trucks. Although these processes are capable of sizeable VOC emissions, the hydrocarbon inventory indicates that their contribution to the ozone problem in the Wasatch Front is insignificant.

Control of Volatile Organic Compounds from the Use of Cutback Asphalt: Since l973-74 the State has adopted a policy to eliminate as much as possible the use of cutback asphalts and substitute emulsions in their place. In l975 the Federal Highway Administration adopted a similar policy and urged all states to comply.

There are still some applications where the use of emulsions do not give satisfactory results and cutback must be employed, primarily during the winter months. The following is a summary of the past and projected use of cutback asphalts and emulsions in the Wasatch Front by the Utah Department of Transportation:

	Emulsions	Cutback
Three Year Average (l975-l977)	l477 tons	l696 tons
l982	2000 tons	l200 tons
Anticipated in l987	2400 tons	400 tons

Regulations have been enacted which have reduced these projections. Emulsions are used almost exclusively in the nonattainment area.

Solvent Metal Cleaning: Volatile organic emissions occur when solvents are used during metal cleaning operations. Positive emission reductions are required through the use of proper operating practices and efficient control equipment, which include but are not limited to:

1) Covering degreasing equipment whenever possible.
2) Proper use of solvent sprays.
3) Various means of reducing the amount of solvent carried out of the degreaser on cleaned work.
4) Prompt repair of leaking equipment.
5) Proper disposal of wastes containing volatile organic solvent.

Effective control devices are required on all degreasing operations in the nonattainment area. The level of control for major sources is detailed by system B in EPA Publication 45/2-77-022 "Control of Volatile Organic Emissions from Solvent Metal Cleaning". Conveyorized degreasers smaller than 2.0 m^2 (approx. 2l.5 ft^2) of air/vapor interface would be exempted from the requirements of a major control device and open top vapor degreasers smaller than l m^2 (approx. l0.8 ft^2) of open area would be exempted from the application of refrigerated chillers (or carbon absorbers). Effective disposal of waste solvent would require storage in covered containers and disposal by a method which prevents its emission to the atmosphere.

Perchloroethylene Dry Cleaning Plants: Hydrocarbon emissions occur from leaks, waste disposal, and dryer exhausts. All dry cleaning plants are required to control leaks promptly and dispose of waste properly. In addition, the larger plants are required to install carbon adsorption technology or use some other technique capable of reducing emissions by at least 90% on their dryer exhausts.

Other Sources: Regulations have been enacted which restrict the emissions from other processes including:

Paper coating
Fabric and Vinyl coating
Metal furniture coating
Large appliance surface coating
Magnet wire coating
Flat wood coating
Miscellaneous metal parts coating
Graphic arts
Synthesized pharmaceutical manufacturing

The regulations implementing this section of the SIP are contained in Section R307-1-4.9 of the Utah Air Conservation Regulations. The emissions inventory shows that these sources are only minor constituents of the hydrocarbon emissions inventory (see Figure IX.D.8).

IX.D.1.e Demonstration of Attainment and Reasonable Further Progress

A demonstration of attainment based on data gathered during 1981 is made based on the linear HC-O_3 relationship because it is the only year with adequate ambient hydrocarbon data and the year with the most complete ozone data. The demonstration of attainment based on the EKMA procedure uses the last 3 years of ambient ozone data collected at Salt Lake City and Bountiful.

Linear Relationship

The highest ozone readings are associated with high hydrocarbon readings monitored in the urban core of Salt Lake City. The most significant reductions of hydrocarbons in this area are attributable to the gradual reduction in the 'hydrocarbons per vehicle mile' emission factor as a result of the FMVCP.

Figure IX.D.9 shows the estimated urban core emissions from 1980 through 1987 and the percent reduction from the 1980 and the l98l emissions inventories.

As indicated in Section IX.D.1.b the hydrocarbon reduction requirement for this area is 32%. Figure IX.D.9 shows the 1981 emission inventory as 25,706 Kg/day. Therefore, the inventory necessary for attainment is:

$$25{,}706\ (1 - 0.32) = 17{,}480\ \text{Kg/day}$$

The estimated inventories for the years l98l through l987 are shown in Figure IX.D.10, which shows attainment of the ozone standards by November 1, 1985.

EKMA Modeling Approach: The EKMA approach required that the five highest days at each site in the last three years be modeled.

The fourth highest hydrocarbon reduction requirement at each site is the control requirement at that site. The highest of these site specific control requirements is the overall control requirement for the area.

The following are the site specific control requirements:

	Date	Peak O_3(PPM)	Control Requirement
Salt Lake:	6/28/80	0.l6	29%
Bountiful:	7/28/8l	0.l6	24%

Figure IX.D.8

1980 HYDROCARBON EMISSIONS INVENTORY

		SALT LAKE		DAVIS		COMBINED	
		Kg/day	%	Kg/day	%	Kg/day	%
I.	Local Data Collected						
	A. Highway Vehicles	62,800	61.6	14,420	35.9	77,220	54.3
	B. Major Point Sources	6,898	6.8	18,687	46.5	25,585	18.0
	C. Aircraft	2,550	2.5	10	-	2,560	1.8
	D. Gasoline distribution Losses	8,642	8.5	2,050	5.1	10,692	7.5
	E. Railroads	416	.4	235	.6	651	.5

To Be Deleted

F. Forest fires	1,629	1.6	337	.8	1,966	1.4
G. Cutback Asphalt	194	.2	51	.1	245	.2
H. Area Combustion Process Nat Gas	66	.1	13	-	79	.1
SUBTOTAL	83,195	81.6	35,803	89.1	118,998	83.5
II. Per Capita Emissions						
A. Commercial/Consumer Use	4,850	4.8	1,150	2.9	6,000	4.3
B. Architectural Surface Coating	3,540	3.5	839	2.1	4,379	3.1
C. Degreasing	2,310	2.3	547	1.4	2,857	2.0
D. Automobile Refinishing	1,460	1.4	346	.9	1,806	1.3
E. Dry Cleaning	1,150	1.1	274	.7	1,424	1.0
F. Graphic Arts	617	.6	146	.4	763	.5
SUBTOTAL	13,927	13.7	3,302	8.2	17,229	12.3
III. Per Employee Estimates						
A. Furniture and Fixture Mfg.	503	.5	120	.3	623	.4
B. Rubber and Plastic Prod. Mfg	468	.5	111	.3	579	.4
C. Timber and Wood Products	333	.3	79	.2	412	.3
SUBTOTAL	1,304	1.3	310	.8	1,614	1.2
IV. Apportionment of National Usage						
A. Construction Vehicles	929	.9	222	.6	1,151	.8
B. Lawn and Garden Use	1,660	1.6	394	1.0	2,054	1.5
C. Industrial Vehicles	768	.7	86	.2	854	.6
D. Off-Highway Motorcycles	90	.1	28	.1	118	.1
E. Farm Use	92	.1	36	.1	128	.1
SUBTOTAL	3,539	3.5	766	1.9	4,305	3.1
TOTAL	101,965		40,181		142,146	

Since the Salt Lake control requirement is the more stringent, this value is used to estimate the overall attainment date.

As shown in Figure IX.D.9 the l980 inventory is 27,889 Kg/day; therefore, the attainment inventory is:

27,889 (l - .29) = l9,800 Kg/day

Figure IX.D.11 shows the July l, l980 inventory and the July 1, l984, inventory with and without the control strategies outlined in the SIP.

Figure IX.D.9
ESTIMATED URBAN CORE HC EMISSIONS (kg/day)

	1980	1981	1982	1983	1984	1987
Highway vehicles (tran. incl.)	19,610	17,400	15,700	14,000	12,600	9,027
Highway vehicles (with TCM)	19,610	17,400	15,660	13,951	12,552	8,986
Highway vehicles (with TCM and I/M)					12,277	7,539
Uncontrolled Point Source	523	534	546	558	570	609
Gasoline Dist. Loses	2,276	2,276	1,609	1,609	1,609	1,609
Degreasers	608	621	635	318	324	346
Cut Back Asphalt	51	34	17	0	0	0
Dry Cleaners	303	310	316	158	162	173
Construction Vehicles	247	252	258	264	269	285
Industrial Vehicles	384	392	401	410	419	447
Other Sources	3,887	3,887	3,887	3,887	3,887	3,887
Totals	27,889	25,706	23,329	21,155	19,792	16,342
Percent Reduction from l980		-7.8	-l6.4	-24.l	-29.0	-4l.4
Percent Reductions from l98l			-9.2	-17.7	-23.0	-36.4

To Be Deleted

With I/M	19,517	14,895
Percent Reductions from l980	-30.0	-46.66
Percent Reductions from l98l	-24.1	-42.10

Figure IX.D.10

To Be Deleted

Figure IX.D.11
(values are in kg/day of non-methane hydrocarbons)

	No Controls			
	July 1 1980	July 1 1984	Control Strategies	July 1 1984
Highway Vehicles	l9,6l0	20,406	FMVCP, TCM, I/M	12,277
Gasoline Dist.	2,276	2,276	RACT	1,609
Cutback Asphalt	5l	51	RACT	0
Degreasing	608	663	RACT	324
Dry Cleaning	303	330	RACT	162
Minor Point Source	523	583		570
Construction Vehicle.	247	275		269
Industrial Vehicle.	384	428		419
Sources	3,887	3,887		3,887
Totals	27,889	28,87l		19,517

Figure IX.D.12 shows the attainment inventory and the estimated annual inventories from l980 to l987. As this figure shows, the estimated attainment date is May 1, 1984.

Since the EKMA approach has been approved by EPA, this date is, from the EPA's standpoint, the one that should be used for planning purposes. However, because the EKMA model is not designed for use in areas with complex terrain such as those found in the Utah ozone nonattainment area, the State does not agree with the use of EKMA to demonstrate attainment as part of the Utah SIP planning process. It is the position of the State that the alternate approach of attainment demonstration described in this SIP is appropriate for use in Utah.

This SIP shows that by applying the FMVCP, I/M, and TCMs to mobile sources and RACT to point and area sources in the nonattainment areas, attainment of the ozone standard can be achieved within the deadline established in the Clean Air Act.

To Be Deleted

Figure IX.D.12

R307. Environmental Quality, Air Quality.
R307-110. General Requirements: State Implementation Plan.
R307-110-13. Section IX, Control Measures for Area and Point Sources, Part D, Ozone.

The Utah State Implementation Plan, Section IX, Control Measures for Area and Point Sources, Part D, Ozone, as most recently amended by the Utah Air Quality Board on [~~September 9, 1998~~]December 6, 2006, pursuant to Section 19-2-104, is hereby incorporated by reference and made a part of these rules.

KEY: air pollution, PM10, PM2.5, ozone
Date of Enactment or Last Substantive Amendment: [~~September 2, 2005~~]2006
Notice of Continuation: [~~September 8, 2005~~]June 16, 2006
Authorizing, and Implemented or Interpreted Law: 19-2-104(3)(e)

State of Utah

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M E M O R A N D U M

TO: Air Quality Board

THROUGH: Richard W. Sprott, Executive Secretary

FROM: Robert Clark, Environmental Scientist

DATE: September 6, 2006

SUBJECT: Propose for Public Comment: Amend R307-320, *Davis, Salt Lake and Utah Counties, and Ogden City: Employer-Based Trip Reduction Program*; R307-325, *Davis and Salt Lake Counties and Ozone Nonattainment or Maintenance Areas: Ozone Provisions*; R307-326, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Control of Hydrocarbon Emissions*; R307-327, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Petroleum Liquid Storage*; R307-328, *Davis, Salt Lake, Utah and Weber Counties and Ozone Nonattainment Areas: Gasoline Transfer and Storage*; R307-335, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Degreasing and Solvent Cleaning Operations*; R307-340, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Surface Coating Operations*; R307-341, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Cutback Asphalt*; R307-342, *Davis, Salt Lake, Utah and Weber Counties and Ozone Nonattainment Areas: Qualification of Contractors and Test Procedures for Vapor Recovery Systems for Gasoline Delivery Tanks*; R307-343, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Emissions Standards for Wood Furniture Manufacturing Operations*; and R307-101-2, *Definitions*

As part of the development of the 8-hour ozone maintenance plan, the ozone Reasonably Available Control Technology (RACT) rules and the Employer-Based Trip Reduction rule have been revised to be compatible with the 8-hour ozone maintenance plan. The following general changes were made to all of the rules.

1. All references to the old 1-hour ozone maintenance plan and 1-hour ozone State Implementation Plan (SIP) were removed along with old compliance dates and references that no longer apply. References to Salt Lake and Davis Counties are replaced by the term “ozone maintenance area.”

2. Minor grammatical changes are made to improve the readability of the rules.

Other changes to specific rules are described below.

R307-101-2. *Definitions*

Several definitions were deleted because they are no longer used in any rules. In addition, the definition for "Maintenance Area" was revised to include the date when Provo City was redesignated to attainment for carbon monoxide. A correction was also made to clarify that the eastern portion of Tooele County will not be considered a maintenance area for sulfur dioxide (SO_2) until the SO_2 maintenance plan has been approved by EPA.

R307-320. *Davis, Salt Lake and Utah Counties, and Ogden City: Employer-Based Trip Reduction Program*

Language that would trigger R307-320 as a contingency measure for the PM_{10} SIP is removed because the Trip Reduction Program is no longer listed as a contingency measure in the PM_{10} Maintenance Plan.

R307-325. *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Ozone Provisions*.

1. **General Compliance Provisions.** The ozone RACT requirements were originally grouped together as one subsection of the Utah Air Conservation Rules. In 1998, the Board adopted a major restructuring of the rules and separated the RACT requirements into individual rules. The general provisions at the beginning of the old RACT subsection became a new rule, R307-325, that established applicability, testing, and compliance provisions for all of the new RACT rules. This was an awkward solution, and DAQ is recommending that the applicability, testing, and compliance provisions that are currently in R307-325 be included in each of the ozone RACT rules. The applicability and testing provisions are deleted from R307-325-1 because these provisions are not needed for the general requirements.

2. **Generic RACT provisions.** The 1990 Clean Air Act required EPA to develop 11 new Control Technique Guideline documents for sources of volatile organic compounds (VOC) and Alternative Control Techniques for NO_x by November, 1993. EPA did not meet this deadline; however, the State of Utah was still required to adopt RACT regulations for these source categories. The 1-hour ozone maintenance plan addressed this issue by adopting generic RACT provisions for both VOC and NO_x in R307-325-2. EPA did not accept this approach, and later versions of the maintenance plan established case-by-case VOC RACT for all major sources of VOC. In addition, EPA granted a NO_x waiver that addressed the requirement for NO_x RACT.

When EPA approved the 1-hour maintenance plan in 1997, the Federal Register notice stated that the generic RACT rules were not required, did not meet federal guidelines, and the case-by case determinations were all that was needed. DAQ recommends deleting all

of R307-325-2 because the generic RACT provisions are not required, and no longer serve a useful purpose.

3. **Low-NO_x Burner Contingency Measure.** When the 1-hour ozone maintenance plan was originally adopted, a series of contingency measures were added to Utah's rules that could be implemented immediately if the area violated the ozone standard. Several of the contingency measures that would reduce VOC emissions were implemented proactively in 1999 because the area was not meeting the new 8-hour ozone standard.

The implementation policy for 8-hour maintenance plans does not require contingency measures that have been pre-adopted. Instead, the plan must include a list of potential measures and a schedule for adopting rules expeditiously if the ozone standard is violated. DAQ recommends deleting R307-325-4 that requires the installation of low-NO_x burners as a contingency measure for the ozone maintenance plan. Current ozone modeling indicates that VOC reductions are more effective than NO_x reductions, and therefore this control strategy may not be the best approach to address a future violation of the 8-hour ozone standard. The strategy has been included in the list of possible contingency measures in the ozone plan and would be evaluated as one of many possible choices if the standard is violated in the future.

R307-326, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Control of Hydrocarbon Emissions* and R307-327, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Petroleum Liquid Storage* and R307-335, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Degreasing and Solvent Cleaning Operations* and R307-340, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Surface Coating Operations*

The applicability, testing, and compliance provisions that were located in R307-325-1 were moved into each of these rules.

R307-328, *Davis, Salt Lake, Utah and Weber Counties and Ozone Nonattainment Areas: Gasoline Transfer and Storage* and R307-342, *Davis, Salt Lake, Utah and Weber Counties and Ozone Nonattainment Areas: Qualification of Contractors and Test Procedures for Vapor Recovery Systems for Gasoline Delivery Tanks*

1. These two rules work together to establish the Stage I Vapor Recovery requirements. In general, the provisions in R307-328 apply to the refinery or bulk storage plant where gasoline is loaded into a truck for delivery, the transport vehicle, and the gas station where the gasoline is unloaded into the underground storage tank. R307-342 establishes the requirements for the vapor tightness testing contractor. However, there are some provisions that do not follow this general split. Both rules have been revised to make this division clearer, so that each entity will find all of the applicable requirements in one rule, rather than split between two rules.

2. The applicability, testing, and compliance provisions that were located in R307-325-1 were moved into each of these rules.

R307-341, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Cutback Asphalt* and R307-101-2, *Definitions*

The definition for the term "asphalt" has been moved from R307-101-2 to R307-341. This definition comes from the CTG titled, *Control of Volatile Organic Compounds from Use of Cutback Asphalt, EPA-450/2-077-037, December 1977,* and was added to the general definitions when this RACT rule was adopted in the early 1980's. The term "asphalt" is used in several other rules; however, in those rules the common usage of the term asphalt is more appropriate than the specific language in this definition.

R307-343, *Davis and Salt Lake Counties and Ozone Nonattainment Areas: Emissions Standards for Wood Furniture Manufacturing Operations*

Obsolete language was deleted throughout the R307-343 including old compliance dates. R307-343 is not federally enforceable and DAQ does not plan to submit this rule to EPA as part of the State Implementation Plan for Utah.

Recommendation: Staff recommends that R307-320, 325, 326, 327, 328, 335, 340, 341, 342, 343, and 101-2 be proposed for public comment, as amended.

R307. Environmental Quality, Air Quality.
R307-101. General Requirements.
R307-101-2. Definitions.

Except where specified in individual rules, definitions in R307-101-2 are applicable to all rules adopted by the Air Quality Board.

...

"Ambient Air" means the surrounding or outside air (Section 19-2-102(4)).

"Appropriate Authority" means the governing body of any city, town or county.[

~~"Asphalt or Asphalt Cement" means the dark brown to black cementitious material (solid, semisolid, or liquid in consistency) of which the main constituents are bitumens which occur naturally or as a residue of petroleum refining.~~]

"Atmosphere" means the air that envelops or surrounds the earth and includes all space outside of buildings, stacks or exterior ducts.

...

"Hazardous Air Pollutant (HAP)" means any pollutant listed by the EPA as a hazardous air pollutant in conformance with Section 112(b) of the Clean Air Act. A list of these pollutants is available at the Division of Air Quality.[

~~"Heavy Fuel Oil" means a petroleum product or similar material with a boiling range higher than that of diesel fuel.~~]

"Household Waste" means any solid or liquid material normally generated by the family in a residence in the course of ordinary day-to-day living, including but not limited to garbage, paper products, rags, leaves and garden trash.

...

"Installation" means a discrete process with identifiable emissions which may be part of a larger industrial plant. Pollution equipment shall not be considered a separate installation or installations.

"LPG" means liquified petroleum gas such as propane or butane.

"Maintenance Area" means an area that is subject to the provisions of a maintenance plan that is included in the Utah state implementation plan, and that has been redesignated by EPA from nonattainment to attainment of any National Ambient Air Quality Standard.

(a) The following areas are considered maintenance areas for ozone:

(i) Salt Lake County, effective August 18, 1997; and

(ii) Davis County, effective August 18, 1997.

(b) The following areas are considered maintenance areas for carbon monoxide:

(i) Salt Lake City, effective March 22, 1999;

(ii) Ogden City, effective May 8, 2001; and

(iii) Provo City, effective [~~on the date that EPA approves the maintenance plan that was adopted by the Board on March 31, 2004~~]January 3, 2006.

(c) The following areas are considered maintenance areas for PM10:

(i) Salt Lake County, effective on the date that EPA approves the maintenance plan that was adopted by the Board on July 6, 2005; and

(ii) Utah County, effective on the date that EPA approves the maintenance plan that was adopted by the Board on July 6, 2005; and

(iii) Ogden City, effective on the date that EPA approves the maintenance plan that was adopted by the Board on July 6, 2005.

(d) The following area[~~s are~~] is considered a maintenance area[~~s~~] for sulfur dioxide:[

~~(i)~~]Salt Lake County and the eastern portion of Tooele County above 5600 feet, effective on the date that EPA approves the maintenance plan that was adopted by the Board on January 5, 2005[~~; and~~

~~(ii) the eastern portion of Tooele County above 5600 feet~~].

"Major Modification" means any physical change in or change in the method of operation of a major source that would result in a significant net emissions increase of any pollutant. A net emissions increase that is significant for volatile organic compounds shall be considered significant for ozone. Within Salt Lake and Davis Counties or any nonattainment area for ozone, a net emissions increase that is significant for nitrogen oxides shall be considered significant for ozone. Within areas of nonattainment for PM10, a significant net emission increase for any PM10 precursor is also a significant net emission increase for PM10. A physical change or change in the method of operation shall not include:

...

"Part 70 Source" means any source subject to the permitting requirements of R307-415.[

~~"Peak Ozone Season" means June 1 through August 31, inclusive.~~]

"Person" means an individual, trust, firm, estate, company, corporation, partnership, association, state, state or federal agency or entity, municipality, commission, or political subdivision of a state. (Subsection 19-2-103(4)).

...

"Process Rate" means the quantity per unit of time of any raw material or process intermediate consumed, or product generated, through the use of any equipment, source operation, or control apparatus. For a stationary internal combustion unit or any other fuel burning equipment, this term may be expressed as the quantity of fuel burned per unit of time.[

~~"Production Equipment Exhaust System" means a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting employees from excessive VOC exposure.~~]

"Reactivation of a Very Clean Coal-Fired Electric Utility

Steam Generating Unit" means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(1) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the emission inventory at the time of enactment;

(2) Was equipped prior to shutdown with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(3) Is equipped with low-NOx burners prior to the time of commencement of operations following reactivation; and

(4) Is otherwise in compliance with the requirements of the Clean Air Act.[

~~"Reactor" means any vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions.~~]

"Reasonable Further Progress" means annual incremental reductions in emission of an air pollutant which are sufficient to provide for attainment of the NAAQS by the date identified in the State Implementation Plan.

...

"Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

"Standards of Performance for New Stationary Sources" means the Federally established requirements for performance and record keeping (Title 40 Code of Federal Regulations, Part 60).

"State" means Utah State.[

~~"Synthesized Pharmaceutical Manufacturing" means the manufacture of pharmaceutical products by chemical synthesis.~~]

"Temporary" means not more than 180 calendar days.

"Temporary Clean Coal Technology Demonstration Project" means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the Utah State Implementation Plan and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

...

KEY: air pollution, definitions
Date of Enactment or Last Substantive Amendment: [~~September 8, 2005~~]2006
Notice of Continuation: June 16, 2006
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-320. [~~Davis, Salt Lake and Utah Counties,~~] Ozone Maintenance Areas and Ogden City: Employer-Based Trip Reduction Program.
R307-320-1. Purpose.

The purpose of this program is to reduce the number of measurable vehicle miles driven by employees commuting to and from work by requiring employers with work sites within [~~Davis and Salt Lake Counties~~]ozone maintenance areas to implement strategies designed to reduce the employee drive-alone rate. [~~Under the authority of 19-2-104(1)(h) and (2), a~~]An employer-based trip reduction program is authorized under 19-2-104(1)(h) and (2). It is a state implementation plan control strategy to reduce ambient [~~measures of air pollution~~]ozone and is a potential contingency measure for carbon monoxide. An added benefit of the program is reducing the number of cars on increasingly congested roadways.

R307-320-2. Applicability.

(1) R307-320 applies to any federal, state, or local entity, or any other public department, district (including public universities and public school districts), or agency in Davis or Salt Lake County.

(2)[~~— If the Contingency Requirements for fine particulate are triggered as outlined in Section IX.A.8.b of the State Implementation Plan, R307-320 applies to any federal, state, or local entity, or any other public department, district (including public universities and public school districts), or agency in Utah County.~~

~~(3)~~] If the [~~C~~]contingency [~~R~~]requirements for carbon monoxide are triggered as outlined in Section IX.C.8.[~~h~~]f of the State Implementation Plan, R307-320 applies to any federal, state, or local entity, or any other public department, district (including public universities and public school districts), or agency in Ogden City.

R307-320-3. Definitions.

The following additional definitions apply to R307-320:

"Compressed Work Week" means any work schedule [~~which~~]that eliminates at least one commute trip to a work site in each two week period.

"Drive-alone Rate" means the number of single-occupancy vehicles divided by the sum of single-occupancy vehicles, plus employees using mass transit, ridesharing, biking, walking, telecommuting or having credit for a compressed work week. The drive-alone rate calculation must be based on a typical Monday through Friday work week.

Drive-alone Rate = single-occupancy vehicles/(single-occupancy vehicles + mass transit users + rideshare participants + bikers + walkers + telecommuters + credit for compressed work week).

"Employee" means any person including persons employed by public universities or school districts, who works at or reports to a single work site at least three days per week for at least

six months of the year.

"Employee Transportation Coordinator" means a person assigned the responsibility of developing, implementing, monitoring, tracking, and marketing the trip reduction plan for the employer.

"Employer" means federal, state, or local entity, or any other public department, district (including public universities or public school districts), or agency.

"Peak Travel Period" means the period beginning at 6 a.m. and ending at 10 a.m., Mondays through Fridays.

"Ridesharing" means transportation of more than one person for commute purposes in a vehicle.

"Single-occupancy Vehicles" means vehicles traveling to the work site with a driver and no passengers during the peak travel period.

"Target Drive-alone Rate" means a twenty percent reduction in the drive alone rate based on the 1990 census data for modes of travel in each county. The target drive-alone rate schedule is as follows:

TABLE
TARGET DRIVE-ALONE RATE SCHEDULE

	Davis County Drive-Alone Rate	Salt Lake County Drive-Alone Rate
From 1990 Census Data	0.76	0.77
1st year interim target drive-alone rate	0.72	0.73
2nd year interim target drive-alone rate	0.68	0.69
3rd year interim target drive-alone rate	0.67	0.67
4th year interim target drive-alone rate	0.65	0.65
5th year interim target drive-alone rate	0.63	0.64
6th year interim target drive-alone rate	0.61	0.62
Target drive-alone rate	0.61	0.62

"Telecommuting" means working at home or at a satellite work site, provided the employee does not use a single-occupancy vehicle to travel to the satellite work site.

"Trip Reduction Plan" means a set of strategies designed to reduce the drive-alone rate.

"Vehicle" means motorcycles and on-road vehicles powered by a gasoline or diesel internal combustion engine with nine or less seating positions for adults.

"Work Site" means a building and any group of buildings [~~which~~]that are on physically contiguous parcels of land or on parcels separated solely by private or public roadways or rights-of way.

R307-320-4. Employer Requirements.

(1) Each employer shall assign an employee trip reduction coordinator within 30 days after the effective date of R307-320.

(2) Each employer shall determine the drive-alone rate per work site on an annual basis for a typical Monday through Friday work week during the peak travel period. The drive-alone rate can be determined by one of the following methods in (a), (b) or (c) below.

(a) Information from an annual employee survey.

(i) The employer must use a standardized survey approved by the executive secretary. The survey shall ask the travel distance from the employee's home to the work site, what frequency and mode of transportation the employee used to get to work, and how often the employee participates in a telecommuting program or compressed work week schedule.

(ii) The employer shall administer the survey and shall capture, at a minimum, 75% of the employee population arriving at the work site during the peak travel period.

(b) Verifiable information, less than one year old of the submittal due date, from employer records including:

(i) employee work schedules;

(ii) employee participation in telecommuting schedules;

(iii) employee participation of mass transit;

(iv) employee participation in rideshare arrangements; and

(v) employee participation in non-vehicular transit.

(c) Another method of the employer's choosing, with written approval from the executive secretary.

(3) Each employer shall design and submit to the executive secretary an approvable trip reduction plan for each work site to meet the target drive-alone rate as specified by the target drive-alone rate schedule in R307-320-3.

(a) An employer may combine more than one work site in a trip reduction plan submittal.

(i) The target drive-alone rate for a multi-work site submission shall be a weighted average of the drive-alone rates for the individual work sites.

(ii) The employer may combine a trip reduction plan for any work site within the same county.

(b) The trip reduction plan submittal shall adhere to the following schedule:

(i) Submittal of a trip reduction plan shall be annually on or before the anniversary of the initial due date.

(ii) For employers within Salt Lake and Davis Counties:

(A) The trip reduction plan must be submitted for approval

within 90 days after the employer has been notified.

(B) If the employer has not been notified, then the trip reduction plan must be submitted no later than 360 days after the effective date of this rule.

[~~(iii) For employers within Utah County, the trip reduction plan must be submitted within 90 days after notification by the Division of Air Quality following triggering of contingency measures for PM10 under the provisions of Section IX.A.8.b of the State Implementation Plan.~~

] (c) Materials and information submitted to the executive secretary shall include:

(i) A letter of commitment to fully implement an approved trip reduction plan signed by an authorized employee at the work site.

(ii) The name and signature of the employee transportation coordinator;

(iii) The drive-alone rate for the work site;

(iv) General work site information including name and address of organization; general layout of buildings and parking areas; location of major streets; location of nearby mass transit stops; number of total employees; number of employees arriving at the work site during peak travel periods; current and planned incentives, disincentives, and facilities available encouraging alternatives to single-occupant vehicle commuting; the type of activities conducted at the work site; and the time spent by the employee transportation coordinator in complying with the plan.

(d) A trip reduction plan designed to meet the target drive-alone rate schedule may include but is not limited to employer involvement in the following:

(i) Subsidized bus passes;

(ii) Rideshare matching programs;

(iii) Vanpool leasing programs;

(iv) Telecommuting programs;

(v) Compressed work week schedule programs and flexible work schedule programs;

(vi) Work site parking fee programs;

(vii) Preferential parking for rideshare participants;

(viii) Transportation for business related activities;

(ix) A guaranteed ride home program;

(x) On-site facility improvements;

(xi) Soliciting feedback from employees;

(xii) On-site daycare facilities;

(xiii) Coordination with local transit authorities for improved mass transit service and information on mass transit programs; and

(xiv) Recognition and rewards for employee participation.

(e) An approvable plan shall contain all the information required in R307-320-4. The executive secretary shall approve or request revision of the trip reduction plan within 60 days of the plan submittal.

(4) Each employer shall implement a trip reduction plan approved by the executive secretary.

(5) Each employer shall inform employees of the trip reduction plan and options available to them for participation.

R307-320-5. Recordkeeping.

(1) The employer shall keep records of all documents necessary to prove compliance with and verify implementation of an approved trip reduction plan for at least two years from the plan approval date.

(2) Approved trip reduction plans shall be kept for five years from date of approval.

(3) Employer trip reduction records are subject to review by representatives of the executive secretary.

R307-320-6. Violations.

(1) The following are violations of this rule:

(a) failure to submit an approvable employer-based trip reduction plan as specified in R307-320-4;

(b) providing false information;

(c) failure to submit a revised employer-based trip reduction plan when requested by the executive secretary;

(d) failure to implement an approved trip reduction plan;

(e) failure to maintain records as specified in R307-320-5;

(f) upon receipt of the second disapproval notice and until a revised plan is submitted and approved, the employer is in violation of this rule.

(2) Failure to achieve the target drive-alone rate is not a violation of this rule.

R307-320-7. Exemptions.

(1) An employer with less than 100 employees at a work site is exempt from the requirements of this rule.

(2) An employer who has met the target drive-alone rate is exempt from requirements stated in R307-320-4(3) and (4). The employer must still submit the drive-alone rate information to the executive secretary annually.

(3) Employees using vehicles for commute purposes as part of their job responsibility for emergency response are exempt from the drive-alone rate determination if they do not have the option, because of employer policies, to participate in telecommuting programs, compressed work week schedules, or as a rideshare driver, as approved by the executive secretary.

(a) An employer seeking exemption status shall comply with all requirements of the rule until an exemption is granted.

(b) The executive secretary shall approve or deny a request for exemption within 90 days of application.

(4) Other exemptions may be granted on a case by case basis and must be approved by the executive secretary.

(a) The employer seeking exemption must be able to demonstrate that the trip reduction program causes an adverse impact on the employer's ability to provide services or creates an undue hardship[~~s~~].

(b) The employer may also seek an exemption by providing an

alternative to the Trip Reduction Program that shows, at a minimum, for the work site seeking exemption, a reduction in oxides of nitrogen equivalent to that achieved by the Trip Reduction Program when implemented to the target drive-alone rate schedule in the table in R307-320-3. The employer shall provide all substantiating information and calculations.

(c) An employer seeking exemption status shall comply with all requirements of the rule until an exemption is granted.

(d) The executive secretary shall approve or deny a request for exemption within 90 days of application.

KEY: air pollution, motor vehicles, trip reduction[~~*~~]
Date of Enactment or Last Substantive Amendment: [~~September 15, 1998~~]2006
Notice of Continuation: July 7, 2005
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(h)

R307. Environmental Quality, Air Quality.
R307-325. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: General Requirements[~~Ozone Provisions~~].
R307-325-1. Purpose.

Establish general requirements for control of volatile organic compounds in nonattainment and maintenance areas.

R307-325-2. Applicability.

R307-325 applies to all sources located in any nonattainment or maintenance area for ozone.

R307-325-[~~1~~]3. Definition[~~s~~][~~, Applicability~~]and General Requirement[~~s~~].

[~~(1) R307-325 applies to all sources in R307-326 through 341, major sources as defined and outlined in section 182 of the Clean Air Act and non-major sources located in Davis and Salt Lake Counties and in any nonattainment area for ozone as defined in the State Implementation Plan. For permitting of any new source or modification of any existing source, see R307-401; for operating permits, see R307-415.~~

~~(2)~~]No person [~~may permit~~]shall allow or cause volatile organic compounds [~~VOCs~~] to be spilled, discarded, stored in open containers, or handled in any other manner, which would result in evaporation in excess of that which would result from the application of [~~reasonably available control technology (RACT) (as defined in 40 CFR 51.100(o))~~]control technology that is reasonably available considering technological and economic feasibility.

[~~(3) Any person may apply to the executive secretary for approval of an alternative test method, an alternative method of control, an alternative compliance period, an alternative emission limit, or an alternative monitoring schedule. The application must include a demonstration that the proposed alternative produces an equal or greater air quality benefit than those required by R307-325 through 341, or that the alternative test method is equivalent to that required by these regulations. The executive secretary shall obtain concurrence from EPA when approving an alternative test method, an alternative method of control, an alternative compliance period, an alternative emission limit, or an alternative monitoring schedule.~~

~~(4) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state~~

~~methods, to determine the efficiency of the control device. In addition, any control device must meet the applicable requirements, (including record keeping) of R307-340-2 and 13. A record of all tests, monitoring, and inspections required by R307-325 through 341 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or his representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days of when it was found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.~~

~~(5) For purposes of determining compliance with emission limits, VOCs and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.~~

~~R307-325-2. Existing Sources.~~

~~(1) Existing Major Sources.~~

~~(a) Any source of VOCs as of June 14, 1995, for which no specific emission limitations or other control requirement has been set forth in R307-325 through 341 and which is classified as a major source as defined and outlined in section 182 of the Clean Air Act shall utilize reasonably available control technology (RACT) as defined in 40 CFR 51.100(o).~~

~~(b) Existing sources of nitrogen oxides for which no specific emission limitations or other control requirement has been set forth in R307-325 through 341 and which are classified as a major source as defined and outlined in Section 182 of the federal Clean Air Act shall utilize Reasonably Available Control Technology (RACT) as outlined in R307-325 through 341 for specific source categories or as defined in 40 CFR 51.100(o). RACT determinations shall be made on a case by case basis and may, to the extent allowable by the executive secretary, be applied on a regionally averaged basis for the pertinent nonattainment area. Application of RACT to sources of oxides of nitrogen within the area of nonattainment for ozone and in Davis and Salt Lake Counties may, in some instances, have been predicated on other requirements of state or federal rule. In such instances, the executive secretary may determine that such prior application of RACT has satisfied all applicable requirements, regardless of whether or not the~~

~~level of controlled emissions due to application of RACT for one purpose meet the presumptive level of RACT for another. In other instances, where RACT may also be required for reasons other than Section 182 of the Act, the executive secretary may require the most stringent level of control which satisfies RACT.~~

~~(c) The uncontrolled emissions of such sources shall be based upon design capacity or maximum production rate, whichever is greater, at 8760 hours/year operation, and before add-on controls. The emissions from all emission points within the source which are not specifically regulated in R307-325 through 341, and which are not pending regulation as per Section 183 of the Clean Air Act, are combined to determine capacity.~~

~~(d) Sources with potential uncontrolled emissions of VOC or nitrogen oxides in excess of the threshold for a major source outlined in Section 182 of the federal Clean Air Act, but with actual emissions of a lesser amount, may avoid the requirement to apply RACT as defined in 40 CFR 51.100(o) by obtaining an enforceable approval order limiting emissions to actual rates, by restriction of production capacity or hours of operation.~~

~~(2) For sources subject to specific rules which have a cutoff limit for applicability, including (1) above, once a source exceeds the cutoff limit, future operation at emission limits below the cutoff does not preclude RACT (as defined in 40 CFR 51.100(o)) requirements and rule applicability as stated in R307-401.~~

~~(3) For unknown sources existing on June 14, 1995, which are major or Control Techniques Guidance applicable sources and which are found by either the State or EPA in the future, the State will expeditiously develop a specific RACT determination based on the existing Control Techniques Guidance or as defined in 40 CFR 51.100(o) for such sources within a reasonable time after their discovery and submit such determination to EPA for approval as specific SIP revisions.~~

~~R307-325-3. Compliance Schedule.~~

~~By September 29, 1981, 180 days after the effective date of R307-325 through 341, all sources shall be in compliance.~~

~~R307-325-4. Contingency Requirement for Ozone Nonattainment Areas and Salt Lake and Davis Counties.~~

~~If the Contingency Requirements for nitrogen oxides are triggered as outlined in Section IX.D.2.h(2) of the~~

~~State Implementation Plan, all existing sources excluding non-commercial residential dwellings shall install either low oxides of nitrogen burner technology as described in R307-401-4(3), unless such requirement is not physically practical or cost-effective, or controls resulting from application of an equivalent technology, both of which shall be determined by the executive secretary. All sources required to install new controls under R307-325-4 shall submit, within two months after the trigger date, either a schedule for installing the equipment or a request for an exemption. The required equipment shall be operational as soon as practicable or within a reasonable time agreed upon by the source and the executive secretary.~~
~~]~~

R307-325-4. Compliance Schedule.

All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, emission controls, ozone, RACT
[~~June 16,~~] 2006
Notice of Continuation: August 1, 2003
[~~19-2-101~~]
19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-326. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: Control of Hydrocarbon Emissions in Refineries.
R307-326-1. Purpose.

The purpose of R307-326 is to establish Reasonably Available Control Technology (RACT), as required by section 182(2)(A) of the Clean Air Act, for the control of hydrocarbon emissions from refineries that are located in ozone nonattainment and maintenance areas. The rule is based on federal control technique guidance documents.

R307-326-2. Applicability.

R307-326 applies to the owner or operator of any refinery located in any ozone nonattainment or maintenance area.

R307-326-[~~1~~]3. [~~Applicability and~~]Definitions.

[~~(1) R307-325 establishes applicability and general requirements for R307-326.~~
~~(2)~~]The following additional definitions apply to R307-326[~~:~~].

"Accumulator" means the reservoir of a condensing unit receiving the condensate from the condenser.

"Condens[~~e~~]er" means any device [~~which~~]that removes condensable vapors by a reduction in the temperature of [~~the~~]captured gases.

"Control System" means any number of control devices, including condens[~~e~~]ers, [~~which~~]that are designed and operated to reduce the quantity of volatile organic compounds (VOC) emitted to the atmosphere.

"Hot Well" means the reservoir of a condensing unit receiving the warm condensate consisting primarily of water from the condenser.

"Petroleum Refinery Complex" means any source or installation engaged in producing gasoline, aromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products through distillation of petroleum or through redistillation, cracking, rearrangement, or reforming of unfinished petroleum derivatives.

"Process Drain" means any drain used in a refinery complex on equipment [~~which~~]that processes[~~,~~]or transfers a volatile organic compound or a mixture of volatile organic compounds.

"Process Unit Turnaround" means the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back in operation.

"Vacuum Producing System" means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure.

R307-326-[~~2~~]4. Vacuum Producing Systems.

The emission of noncondensable volatile organic compounds

from the condensers, hot wells, or accumulators of vacuum producing systems shall be controlled by:

(1) piping the noncondensable vapors to a firebox or incinerator, or

(2) compressing the vapors and adding them to the refinery fuel gas, or

(3) other equally effective means provided the design and effectiveness of such means are documented, [~~and~~] submitted to, and approved by the executive secretary.

R307-326-[~~3~~]5. Wastewater (Oil/Water) Systems.

Any wastewater separator handling volatile organic compounds shall be equipped with:

(1) covers and seals approved by the executive secretary on all separators and forebays,

(2) lids or seals on all openings in covers, separators, and forebays. Such lids or seals shall be in the closed position at all times except when in actual use.

R307-326-[4]6. Process Unit Turnaround.

The owner or operator of a petroleum refinery shall insure that a minimum of [~~volatile organic compounds (~~]VOC[~~)~~] are emitted to the atmosphere during process unit turnarounds. The owner or operator shall develop and submit to the executive secretary for approval a procedure for minimizing VOC emissions during turnarounds.[~~The procedure shall be submitted by April 1, 1990.~~] As a minimum the procedure shall provide for:

(1) venting of the process unit or vessel during depressurization and purging to a vapor recovery system, flare or firebox, and

(2) preventing discharge to the atmosphere of emissions of volatile organic compounds from a process unit or vessel until its internal pressure is 136 kPa (19.7 psia) or less; or

(3) an equally effective system provided the design and effectiveness of such system are documented and submitted to and approved by the executive secretary.

(4) keeping records of the following items:

(a) every date that each process unit or vessel is shut down;

(b) the approximate vessel VOC concentration when the VOCs were first discharged to the atmosphere; and

(c) the approximate total quantity of VOCs emitted to the atmosphere.

(5) maintaining records. The records required in (4) above shall be kept for at least two years and shall be made available for review by the executive secretary or [~~his~~] the executive secretary's representative.

R307-326-[~~5~~]7. Catalytic Cracking Units.

Flue gas produced by catalytic cracker catalyst regeneration units shall be vented to a waste heat boiler[~~,~~]or a process heater firebox,or incinerated, or controlled by other methods, provided

the design and effectiveness of such methods are documented, [~~and~~]submitted to, and approved by the executive secretary.

R307-326-[~~6~~]8. Safety Pressure Relief Valves.

All safety pressure relief valves handling organic material shall be vented to a flare, firebox, or vapor recovery system, or controlled by the inspection, monitoring, and repair requirements described in R307-326-[~~7~~]9.

R307-326-[~~7~~]9. Monitoring of Leaks from Petroleum Refinery Equipment.

(1) The owner or operator of a petroleum refinery complex shall develop and conduct a VOC monitoring program and shall follow the recording, reporting, and operating requirements consistent with R307-326-[~~7~~]9. The monitoring program shall be submitted 30 days prior to start up of the petroleum refinery complex or as determined necessary by the executive secretary.

(2) Any affected component within a petroleum refinery complex found to be leaking shall be repaired and retested as soon as practicable, but not later than fifteen (15) days after the leak is detected. A leaking component is defined as one [~~which~~]that has a VOC concentration exceeding 10,000 parts per million by volume (ppmv) when tested by a VOC detection instrument at the leak source in the manner described in 40 CFR 60, Appendix A, Reference Method 21, using methane or hexane as the calibration gas. Components not subject to New Source Performance Standards Subpart GGG shall use methane or hexane as calibration gas, provided a relative response factor for each individual instrument is determined for the calibration gas used. Those leaks that cannot be repaired until the unit is shut down for turnaround shall be identified with a tag and recorded as per (6) below and shall be reported as [~~required by~~]per (7) below. The executive secretary, in coordination with the refinery owner or operator, may require early unit turnaround based on the number and severity of tagged leaks awaiting turnaround.

(3) Monitoring Requirements.

(a) In order to ensure that all existing VOC leaks are identified and that new VOC leaks are located as soon as practicable, the refinery owner or operator shall perform necessary monitoring using visual observations when specified or the method described in 40 CFR 60, Appendix A, Reference Method 21, as follows:

(i) Monitor at least one time per year (annually) all pump seals, valves in liquid service, and process drains;

(ii) [~~m~~]Monitor four times per year (quarterly) all compressor seals, valves in gaseous service, and pressure relief valves in gaseous service[~~.~~];

(iii) Monitor visually 52 times per year (weekly) all pump seals;

(iv) Monitor within 24 hours (with a portable VOC detection device) or repair within 15 days any pump seal from which liquids are observed dripping;

(v) Monitor any relief valve within 24 hours after it has been vented to the atmosphere;

(vi) Monitor immediately after repair any component that was found leaking;

(vii) [~~f~~]For all other valves considered "unsafe-to-monitor" or inaccessible during an annual inspection, the owner[~~/~~] or operator shall document to the executive secretary the number of valves considered "unsafe-to-monitor" or inaccessible, the dangers involved or reasons for inaccessibility, the location of these valves, and the procedures that the owner[~~/~~] or operator shall follow to ensure that the valves do not leak. The documentation for each calendar year shall be submitted for approval to the executive secretary 15 days after the last day of each calendar year. At a minimum, the inaccessible valves shall be monitored at least once per year (annually).[~~— This documentation shall be submitted for approval to the executive secretary 15 days after the last day of each calendar year.~~]

(b) For the purpose of R307-326, gaseous service for pipeline valves and pressure relief valves is defined as the VOC being gaseous at conditions that prevail in the components during normal operations. Pipeline valves and pressure relief valves in gaseous service and other components subject to leaks shall be noted or marked so that their location within the refinery complex is obvious to the refinery operator performing the monitoring and to the State of Utah, Division of Air Quality.

(4) Exemptions. The following are exempt from the monitoring requirements of (3) above:

(a) Pressure relief devices [~~which~~]that are connected to an operating flare header, firebox, or vapor recovery devices, storage tank valves, and valves that are not externally regulated;[~~— and~~]

(b) Refinery equipment containing a stream composition less than 10 percent by weight VOC; and

(c) Refinery equipment containing natural gas supplied by a public utility as defined by the Utah Public Service Commission.

(5) Alternat[~~iv~~]e Monitoring Methods and Requirements.

(a) If at any time after two complete liquid service inspections and five complete gaseous service inspections, the owner or operator of a petroleum refinery can demonstrate that modifications to (3) above are in order, he may apply in writing to the Air Quality Board for a variance from the requirements of (3) above.

(b) This submittal shall include data that have been developed to justify the modification to (3) above. As a minimum, the submittal should contain the following information:

(i) the name and address of the company;

(ii) the name and telephone number of the responsible company representative;

(iii) a description of the proposed alternat[~~iv~~]e monitoring procedures; and

(iv) a description of the proposed alternat[~~iv~~]e operational or equipment controls.

(6) Recording Requirements. Identified leaks shall be noted and affixed with a readily visible and weatherproof tag bearing the identification of the leak and the date the leak was detected. The tag shall remain in place until the leaking component is repaired. The presence of the leak shall also be noted in a log maintained by the operator or owner of the refinery. The log shall contain, at a minimum, the name of the process unit where the component is located, the type of component, the tag number, the date the leak [~~was~~]is detected, the date repaired, and the date and instrument reading when the recheck of the component is made. The log should also indicate those leaks [~~which~~]that cannot be repaired until turnaround, and summarize the total number of components found leaking. The operator or owner of the refinery complex shall retain the leak detection log for two years after the leak has been repaired and shall make the log available to the executive secretary upon request.

(7) Reporting Requirements. The operator or owner of a petroleum refinery complex shall submit a report to the executive secretary by the 15th day of January, April, July, and October of each year listing the total number of components inspected, all leaks that have been located during the previous 3 calendar months but not repaired within 15 days, all leaking components awaiting unit turnaround and the total number of components found leaking. In addition, the refinery operator or owner shall submit a signed statement with each report that all monitoring has been performed as stipulated in R307-326-[~~7~~]9.

(8) Additional Requirements. Any time a valve, with the exception of safety pressure relief valves, is located at the end of a pipe or line containing VOC, the end of the line shall be sealed with one of the following: a second valve, a blind flange, a plug or a cap. This sealing device shall only be removed when the line is in use for sampling.

R307-326-10. Alternate Methods of Control.

(1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-326, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and

inspections required by R307-326 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, VOCs and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

R307-326-11. Compliance Schedule.

All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, refinery, gasoline, ozone
Date of Enactment or Last Substantive Amendment: [~~September 15, 1998~~]2006
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Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-327. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: Petroleum Liquid Storage.
R307-327-1. Purpose.
The purpose of R307-327 is to establish Reasonably Available Control Technology (RACT), as required by section 182(2)(A) of the Clean Air Act, for refineries and petroleum liquid storage facilities that are located in any ozone nonattainment or maintenance area. The rule is based on federal control technique guidance documents.

R307-327-2. Applicability.
R307-327 applies to the owner or operator of any refinery or petroleum liquid storage facility located in any ozone nonattainment or maintenance area.

R307-327-[~~1~~]3. [~~Applicability and~~]Definitions.
[~~(1) R307-325 establishes applicability and general requirements for R307-327.~~
~~(2)~~]The following additional definitions apply to R307-327:
"Average Monthly Storage Temperature" means the average daily storage temperature measured over a period of one month.
"Waxy, Heavy Pour Crude Oil" means a crude oil with a pour point of 50 degrees F or higher as determined by the American Society for Testing and Materials Standard D97-66, "Test for pourpoint of petroleum oils."

R307-327-4. General Requirements.
[~~(3)~~](1) Any existing stationary storage tank, reservoir or other container with a capacity greater than 40,000 gallons (150,000 liters) [~~which~~]that is used to store volatile petroleum liquids with a true vapor pressure greater than 10.5 kilo pascals (kPa) (1.52 psia) at storage temperature shall be fitted with control equipment [~~which~~]that will minimize vapor loss to the atmosphere. S[~~uch s~~]torage tanks, except [~~storage tanks~~]those erected before January 1, 1979, which are equipped with external floating roofs, shall be fitted with an internal floating roof [~~which~~]that shall rest on the surface of the liquid contents and shall be equipped with a closure seal or seals to close the space between the roof edge and the tank wall, or alternative equivalent controls, provided the design and effectiveness of such equipment is documented and submitted to and approved by the executive secretary. The owner or operator shall maintain a record of the type and maximum true vapor pressure of stored liquid.
[~~(4)~~](2) The owner or operator of a petroleum liquid storage tank not subject to [~~(3)~~](1) above, but containing a petroleum liquid with a true vapor pressure greater than 7.0 kPa (1.0 psia), shall maintain records of the average monthly storage temperature, the type of liquid, throughput quantities, and the maximum true vapor pressure.

R307-327-[~~2~~]5. Installation and Maintenance.

(1) The owner or operator shall ensure that all control equipment on storage vessels [~~shall be~~]is properly installed and maintained.

(a) There shall be no visible holes, tears or other openings in any seal or seal fabric and[~~,~~] all openings, except stub drains, shall be equipped with covers, lids, or seals.

(b) All openings in floating roof tanks, except for automatic bleeder vents, rim space vents, and leg sleeves, shall provide a projection below the liquid surface.

(c) The openings shall be equipped with a cover, seal, or lid.

(d) The cover, seal, or lid is to be in a closed position at all times except when the device is in actual use.

(e) Automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports. Rim vents shall be set to open when the roof is being float[~~ing~~]ed off the leg supports or at the manufacturer's recommended setting.

(f) Any emergency roof drain shall be provided with a slotted membrane fabric cover or equivalent cover that covers at least 90 percent of the area of the opening.

(2) The owner or operator shall conduct routine inspections from the top of the tank for external floating roofs or through roof hatches for internal floating roofs at six month or shorter intervals to insure there are no holes, tears, or other openings in the seal or seal fabric.

(a) The cover must be uniformly floating on or above the liquid and there must be no visible defects in the surface of the cover or petroleum liquid accumulated on the cover.

(b) The seal(s) must be intact and uniformly in place around the circumference of the cover between the cover and tank wall.

(3) A close visible inspection of the primary seal of an external floating roof is to be conducted at least once per year from the roof top unless such inspection requires detaching the secondary seal, which would result in damage to the seal system.

(4) Whenever a tank is emptied and degassed for maintenance, an emergency, or any other similar purpose, a close visible inspection of the cover and seals [~~is to~~]shall be made.

(5) The executive secretary must be notified 7 days prior to the refilling of a tank [~~which~~]that has been emptied, degassed for maintenance, an emergency, or any other similar purpose. Any non-compliance with this [~~regulation~~]rule must be corrected before the tank is refilled.

R307-327-[~~3~~]6. Retrofits for Floating Roof Tanks.

(1) Except where specifically exempted in (3) below, all existing external floating roof tanks with capacities greater than 950 barrels (40,000 gals) shall be retrofitted with a continuous secondary seal extending from the floating roof to the tank wall (a rim-mounted secondary seal) if:

(a) The tank is a welded tank, the true vapor pressure of

the contained liquid is 27.6 kPa (4.0 psia) or greater and the primary seal is one of the following:

(i) A metallic type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid-filled seal, or

(ii) Any other primary seals [~~which~~]that can be demonstrated equivalent to the above primary seals.

(b) The tank is a riveted tank, the true vapor pressure of the contained liquid is 10.5 kPa (1.5 psia) or greater, and the primary seal is as described in (a) above.

(c) The tank is a welded or riveted tank, the true vapor pressure of the contained liquid is 10.5 kPa (1.5 psia) or greater and the primary seal is vapor-mounted. When such primary seal closure device can be demonstrated equivalent to the primary seals described in (a) above, these processes apply.

(2) The owner or operator of a storage tank subject to this rule shall ensure that all the seal closure devices [~~shall~~]meet the following requirements:

(a) There shall be no visible holes, tears, or other openings in the seals or seal fabric.

(b) The seals must be intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.

(c) For vapor mounted primary seals, the accumulated area of gaps between the secondary seal and the tank wall shall not exceed 21.2 cm^2 per meter of tank diameter (1.0 in^2 per ft. of tank diameter) and the width of any gap shall not exceed 1.27 cm (1/2 in.). The owner or operator shall measure the secondary seal gap annually and make a record of the measurement.

(3) The following are specifically exempted from the requirements of (1) above:

(a) External floating roof tanks having capacities less than 10,000 barrels (420,000 gals) used to store produced crude oil and condensate prior to custody transfer.

(b) A metallic type shoe seal in a welded tank [~~which~~]that has a secondary seal from the top of the shoe seal to the tank wall (a shoe mounted secondary seal).

(c) External floating roof tanks storing waxy, heavy pour crudes.

(d) External floating roof tanks with a closure seal device or other devices installed [~~which~~]that will control volatile organic compounds(VOC) emissions with an effectiveness equal to or greater than the seals required in (1) above. It shall be the responsibility of the owner or operator of the source to demonstrate the effectiveness of the alternative seals or devices to the executive secretary. No exemption under (3) shall be granted until the alternative seals or devices are approved by the executive secretary.

R307-327-7. Alternate Methods of Control.

((1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission

limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-327, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by R307-327 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, VOCs and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

R307-327-8. Compliance Schedule.

All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, petroleum, gasoline, ozone
Date of Enactment or Last Substantive Amendment: [~~September 15, 1998~~]2006
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Authorizing, and Implemented or Interpreted Law: [~~19-2-101;~~] 19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-328. [~~Davis, Salt Lake, Utah and Weber Counties and~~]Ozone Nonattainment and Maintenance Areas and Utah and Weber Counties: Gasoline Transfer and Storage.
R307-328-1. Purpose.

The purpose of R307-328 is to establish Reasonably Available Control Technology (RACT) for control of gasoline vapors during the filling of gasoline transport vehicles and storage tanks in ozone non-attainment and maintenance areas and Utah and Weber Counties. The rule is based on federal control technique guidance documents. This requirement is commonly referred to as stage I vapor recovery.

R307-328-[~~1~~]2. Applicability[~~ and Definitions~~].

[~~(1) Applicability.~~

~~(a)~~](1) Transport Vehicles. R307-328 applies to the owner or operator of any gasoline tank truck, railroad tank car, or other gasoline transport vehicle that loads or unloads gasoline in[~~ Davis, Salt Lake~~,] Utah or Weber County or any ozone nonattainment or maintenance area.

[~~(b)~~](2) Gasoline Dispensing. R307-328 applies to the owner or operator of any bulk terminal, bulk plant, or service station located in [~~Davis, Salt Lake, ~~]Utah[~~,~~] or Weber County or any ozone nonattainment or maintenance area.

[~~(2) R307-325 establishes general requirements for R307-328.~~

~~~~]

R307-328-3. Definitions.

[~~(3)~~]The following additional definitions apply to R307-328[~~:~~].

"Bottom Filling" means the filling of a tank through an inlet at or near the bottom of the tank designed to have the opening covered by the liquid after the pipe normally used to withdraw liquid can no longer withdraw any liquid.

"Qualified contractor" means a contractor who has been qualified by the executive secretary in accordance with R307-342 to perform vapor tightness tests on gasoline transport vehicles.

"Submerged Fill Pipe" means any fill pipe with a discharge opening which is entirely submerged when the liquid level is 6 inches above the bottom of the tank and the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid.

[

~~**R307-328-2. Compliance Schedule.**~~

~~(1) Sources located in Davis and Salt Lake Counties are subject to the compliance schedule in R307-325-4.~~

~~(2) Sources located in Utah and Weber Counties shall be in compliance with R307-328 by May 1, 2000. The executive secretary may grant a one year waiver from this compliance schedule if the source submits adequate documentation that the compliance date would create undue hardship.~~

~~(3) Sources located in any other area that is designated nonattainment for ozone shall be in compliance within six months of the date the EPA designates the area nonattainment.~~
~~~~

]

R307-328-[~~3~~]4. Loading of Tank Trucks, Trailers, Railroad Tank Cars, and Other Transport Vehicles.

(1) No person shall load or permit the loading of gasoline into any tank truck, trailer, railroad tank car, or other transport vehicle unless the emissions from such vehicle are controlled by use of a vapor collection and control system and submerged or bottom filling. [~~Reasonably available control technology~~] RACT shall be required and in no case shall vapor emissions to the atmosphere exceed 0.640 pounds per 1,000 gallons transferred.

(2) Such vapor collection and control system shall be properly installed and maintained.

(3) The loading device shall not leak.

(4) The loading device shall utilize the dry-break loading design couplings and shall be maintained and operated to allow no more than an average of 15 cc drainage per disconnect for 5 consecutive disconnects.

(5) All loading and vapor lines shall be equipped with fittings which make a vapor tight connection and shall automatically close upon disconnection to prevent release of the organic material.

(6) A gasoline storage and transfer installation that receives inbound loads and dispatches outbound loads ("bulk plant") need not comply with R307-328-[~~3~~]4 if it does not have a daily average throughput of more than 3,900 gallons (15,000 or more liters) of gasoline based upon a 30-day rolling average. Such installations shall on-load and off-load gasoline by use of bottom or submerged filling or alternat[~~iv~~]e equivalent methods. The emission limitation is based on operating procedures and equipment specifications using Reasonably Available Control Technology as defined in EPA documents EPA 450/2-77-026 October 1977, "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals," and EPA-450/2-77-035 December 1977, "Control of Volatile Organic Emissions from Bulk Gasoline Plants." The design effectiveness of such equipment and the operating procedures must be documented and submitted to and approved by the executive secretary.

(7) Hatches of transport vehicles shall not be opened at any time during loading operations except to avoid emergency situations or during emergency situations. Pressure relief valves on storage tanks and transport vehicles shall be set to release at the highest possible pressure, in accordance with State or local fire codes and National Fire Prevention Association guidelines. Pressure in the vapor collection system shall not exceed the transport vehicle pressure relief setting.

(8) Each owner or operator of a gasoline storage and dispensing installation shall conduct testing of vapor collection systems used at such installation and shall maintain records of all tests for no less than two years. Testing procedures of vapor collection systems shall be approved by the executive secretary and shall be consistent with the procedures described in the EPA

document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

(9) Semi-annual testing shall be conducted and records maintained of such test. The frequency of tests may be altered by the executive secretary upon submittal of documentation which would justify a change.

(10) The vapor collection and vapor processing equipment shall be designed and operated to prevent gauge pressure in the delivery vessel from exceeding 18 inches of water and prevent vacuum from exceeding 6 inches of water. During testing and monitoring, there shall be no reading greater than or equal to 100 percent of the lower explosive limit measured at 1.04 inches around the perimeter of a potential leak source as detected by a combustible gas detector. Potential leak sources include, but are not limited to, piping, seals, hoses, connections, pressure or vacuum vents, and vapor hoods. In addition, no visible liquid leaks are permitted during testing or monitoring.

R307-328-[4]5. Stationary Source Container Loading.

(1) No person shall transfer or permit the transfer of gasoline from any delivery vessel (i.e. tank truck or trailer) into any stationary storage container with a capacity of 250 gallons or greater unless such container is equipped with a submerged fill pipe and at least 90 percent of the gasoline vapor, by weight, displaced during the filling of the stationary storage container is prevented from being released to the atmosphere. This requirement shall not apply to:

(a) the transfer of gasoline into any stationary storage container of less than 550 gallons used primarily for the fueling of implements of husbandry if such container is equipped with a permanent submerged fill pipe;

(b) the transfer of gasoline into any stationary storage container having a capacity of less than 2,000 gallons which was installed prior to January 1, 1979, if such container is equipped with a permanent submerged fill pipe;

(c) the transfer of gasoline to storage tanks equipped with floating roofs or their equivalent which have been approved by the executive secretary.

(2) The 90 percent performance standard of the vapor control system shall be based on operating procedures and equipment specifications. The design effectiveness of such equipment and the operating procedure must be documented and submitted to and approved by the executive secretary.

(3) Each owner or operator of a gasoline storage tank or the owner or operator of the gasoline delivery vessel subject to (1) above shall install vapor control equipment, which includes, but is not limited to:

(a) vapor return lines and connections sufficiently free of restrictions to allow transfer of vapor to the delivery vessel or to the vapor control system, and to achieve the required recovery;

(b) a means of assuring that the vapor return lines are

connected to the delivery vessel, or vapor control system, and storage tank during tank filling;

(c) restrictions in the storage tank vent line designed and operated to prevent:

(i) the release of gasoline vapors to the atmosphere during normal operation; and

(ii) gauge pressure in the delivery vessel from exceeding 18 inches of water and vacuum from exceeding 6 inches of water.

R307-328-[~~5~~]6. Transport Vehicles.

(1) Gasoline transport vehicles must be designed and maintained to be vapor tight during loading and unloading operations as well as during transport, except for normal pressure venting required under United States Department of Transportation Regulations.

(2) The design of the vapor recovery system shall be such that when the delivery tank is connected to an approved storage tank vapor recovery system or loading terminal, 90% vapor recovery efficiencies are realized. The connectors of the delivery tanks shall be compatible with the fittings on the fill pipes and vapor vents at the storage containers and gasoline loading terminals where the delivery tank will service or be serviced. Adapters may be used to achieve compatibility.

[~~(2)~~](3) No person shall knowingly allow the introduction of gasoline into, dispensing of gasoline from, or transportation of gasoline in a gasoline transport vehicle without a current Utah Vapor Tightness Certificate.

[~~(3)~~](4) A vapor-laden transport vehicle may be refilled only at installations equipped to recover, process or dispose of vapors. Transport vehicles [~~which~~]that only service locations with storage containers specifically exempted from the requirements of R307-328-[~~4~~]5 need not be retrofitted to comply with R307-328-[~~5~~]6(1)-(3) above, provided such transport vehicles are loaded through a submerged fill pipe or equivalent equipment provided the design and effectiveness of such equipment are documented and submitted to and approved by the executive secretary.

R307-328-[~~6~~]7. Leak Tight Testing.

(1) Gasoline tank trucks and their vapor collection systems shall be tested for leakage by a qualified contractor using procedures approved by the executive secretary and consistent with the procedures described in R307-342.

(2) Gasoline tank trucks and their vapor collection systems shall be tested for leakage annually between December 1 and May 1.

(3) The tank shall not sustain a pressure change of more than 750 pascals (3 inches of H_2O) in five minutes when pressurized (by air or inert gas) to 4500 pascals (18 inches of H_2O) or evacuated to 1500 pascals (6 inches of H_2O).

(4) No visible liquid leaks are permitted during testing.

(5) Gasoline tank trucks shall be certified leak tight at least annually by a qualified contractor approved by the executive

secretary.

(6) Each owner or operator of a gasoline tank truck shall have in his possession a valid vapor tightness certification, which:

(a) shows the date that the gasoline tank truck last passed the Utah vapor tightness certification test; and

(b) shows the identification number of the gasoline tank truck.

(7) Records of certification inspections, as well as any maintenance performed, shall be retained by the owner or operator of the tank truck for a two year period and be available for review by the executive secretary or [~~his~~] the executive secretary's representative.

R307-328-8. Alternate Methods of Control.

(1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-328, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by R307-328 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, volatile organic compounds and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

R307-328-9. Compliance Schedule.

Sources located within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180

days of the effective date of designation to nonattainment.

KEY: air pollution, gasoline transport, ozone
Date of Enactment or Last Substantive Amendment: [~~July 15, 1999~~]2006
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Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-335. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: Degreasing and Solvent Cleaning Operations.
R307-335-1. Purpose.

The purpose of this rule is to establish Reasonably Available Control Technology (RACT) for degreasing and solvent cleaning operations that are located in an ozone nonattainment or maintenance area. The rule is based on federal control technique guidance documents.

R307-335-2. Applicability.

R307-335 applies to all degreasing or solvent cleaning operations that use volatile organic compounds (VOCs) and are located in any ozone nonattainment or maintenance area.

R307-335-[~~1~~]3. [~~Applicability and~~]Definitions.

[~~(1) The provisions of this section are applicable to the use of all volatile organic compounds.~~

~~(2) R307-325 establishes applicability and general requirements for R307-335.~~

~~(3)~~]The following additional definitions apply to R307-335:

"Batch Open Top Vapor Degreasing" means the batch process of cleaning and removing grease and soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

"Cold Cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersing while maintaining the solvent below its boiling point.

"Conveyorized Degreasing" means the continuous process of cleaning and removing greases and soils from metal surfaces by using either cold or vaporized solvents.

"Freeboard Ratio" means the freeboard height divided by the width of the degreaser.

"Open Top Vapor Degreaser" means the batch process of cleaning and removing soils from metal surfaces by condensing low solvent vapor on the colder metal parts.

"Separation Operation" means any process that separates a mixture of compounds and solvents into two or more components. Specific mechanisms include extraction, centrifugation, filtration, and crystallization.

"Solvent Metal Cleaning" means the process of cleaning soils from metal surfaces by cold cleaning, open top vapor degreasers, or conveyorized degreasing.

R307-335-[~~2~~]4. Cold Cleaning Facilities.

No owner or operator shall operate a degreasing or solvent cleaning operation unless [~~the~~]conditions [~~contained in~~](1) through (7) below are met.

(1) A cover shall be installed which shall remain closed except during actual loading, unloading or handling of parts in cleaner. The cover shall be designed so that it can be easily

operated with one hand if:

(a) the volatility of the solvent is greater than 2 kPa (15 mm Hg or 0.3 psi) measured at 38 degrees C (100 degrees F),

(b) the solvent is agitated, or

(c) the solvent is heated.

(2) An internal draining rack for cleaned parts shall be installed on which parts shall be drained until all dripping ceases. If the volatility of the solvent is greater than 4.3 kPa (32 mm Hg at 38 degrees C (100 degrees F)), the drainage facility must be internal, so that parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Waste or used solvent shall be stored in covered containers. Waste solvents or waste materials which contain solvents shall be disposed of by recycling, reclaiming, by incineration in an incinerator approved to process hazardous materials, or by an alternate means approved by the executive secretary.

(4) Tanks, containers and all associated equipment shall be maintained in good operating condition and leaks shall be repaired immediately or the degreaser shall be shutdown.

(5) Written procedures for the operation and maintenance of the degreasing or solvent cleaning equipment shall be permanently posted in an accessible and conspicuous location near the equipment.

(6) If the solvent volatility is greater than 4.3 kPa (33 mm Hg or 0.6 psi) measured at 38 degrees C (100 degrees F), or if solvent is heated above 50 degrees C (120 degrees F), then one of the following control devices shall be used:

(a) freeboard that gives a freeboard ratio greater than 0.7;

(b) water cover if the solvent is insoluble in and heavier than water);

(c) other systems of equivalent control, such as a refrigerated chiller or carbon absorption.

(7) If used, the solvent spray shall be a solid fluid stream at a pressure [~~which~~]that does not cause excessive splashing and may not be a fine, atomized or shower type spray.

R307-335-[~~3~~]5. Open Top Vapor Degreasers.

Owners or operators of open top vapor degreasers shall, in addition to meeting the requirements of R307-335-[~~2~~]4(3), (4) and (5),

(1) Equip the vapor degreaser with a cover that can be opened and closed without disturbing the vapor zone. The cover shall be closed except when processing work loads through the degreaser;

(2) Install one of the following control devices:

(a) Equipment necessary to sustain:

(i) a freeboard ratio greater than or equal to 0.75, and

(ii) a powered cover if the degreaser opening is greater than 1 square meter (10 square feet),

(b) Refrigerated chiller,

(c) Enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser),

(d) Carbon adsorption system, with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area when cover is open and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle;

(3) Minimize solvent carryout by:

(a) Racking parts to allow complete drainage,

(b) Moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute),

(c) Holding the parts in the vapor zone at least 30 seconds or until condensation ceases,

(d) Tipping out any pool of solvent on the cleaned parts before removal, and

(e) Allowing the parts to dry within the degreaser for at least 15 seconds or until visibly dry.

(4) Spray parts only in or below the vapor level,

(5) Not use ventilation fans near the degreaser opening, nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) in degreaser open area, unless necessary to meet State and Federal occupational, health, and safety requirements. The exhaust ventilation flow indicated above shall be measured using EPA Reference Methods 1 and 2 of 40 CFR Part 60, or by EPA-approved equivalent state methods;

(6) Not degrease porous or absorbent materials, such as cloth, leather, wood or rope;

(7) Not allow work loads to occupy more than half of the degreaser's open top area;

(8) Ensure that solvent is not visually detectable in water exiting the water separator;

(9) Install safety switches on the following:

(a) Condenser flow switch and thermostat (shuts off sump heat if condenser coolant is either not circulating or too warm); and

(b) Spray switch (shuts off spray pump if the vapor level drops excessively, i.e., greater than 10 cm (4 inches); and

(10) Ensure that the control device specified by (2)(b) or (d) above meet the applicable requirements of R307-340-[~~2~~]4 and [~~13~~]15.

Open top vapor degreasers with an open area smaller than one square meter (10.9 square feet) are exempt from (2)(b) and (d) above.

R307-335-[4]6. Conveyorized Degreasers.

Owners and operators of conveyorized degreasers shall, in addition to meeting the requirements of R307-335-[~~2~~]4(3), (4) and (5) and R307-335-[~~3~~]5(5):

(1) Install one of the following control devices for conveyorized degreasers with an air/vapor interface equal to or greater than 2.0 square meters (21.6 square feet):

(a) Refrigerated chiller or

(b) Carbon adsorption system, with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area when downtime covers are open, and exhausting less than 25 parts per million of solvent, by volume, averaged over a complete adsorption cycle.

(2) Equip the cleaner with equipment, such as a drying tunnel or rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor.

(3) Provide downtime covers for closing off the entrance and exit during shutdown hours. Ensure that down-time cover is placed over entrances and exits of conveyorized degreasers immediately after the conveyor and exhaust are shutdown and is removed just before they are started up.

(4) Minimize carryout emissions by racking parts for best drainage and maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute).

(5) Ensure that the control device specified by (1)(a) or (b) above meet the applicable requirements of R307-340-[~~2~~]4 and [~~13~~]15.

(6) Minimize openings: Entrances and exits should silhouette work loads so that the average clearance (between parts and the edge of the degreaser opening) is either less than 10 cm (4 inches) or less than 10% of the width of the opening.

(7) Install safety switches on the following:

(a) Condenser flow switch and thermostat - shuts off sump heat if coolant is either not circulating or two warm;

(b) Spray switch - shuts off spray pump or conveyor if the vapor level drops excessively, i.e., greater than 10 cm or (4 inches); and

(c) Vapor level control thermostat - to shuts off sump level if vapor level rises too high.

(8) Ensure that solvent is not visibly detectable in the water exiting the water separator.

R307-335-7. Alternate Methods of Control.

(1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-335, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or

operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by R307-335 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, VOCs and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

R307-335-7. Compliance Schedule.

All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, degreasing[*], solvent cleaning[*], ozone
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R307. Environmental Quality, Air Quality.
R307-340. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: Surface Coating Processes.
R307-340-1. Purpose.
The purpose of this rule is to establish Reasonably Available Control Technology(RACT), for surface coating operations that are located in an ozone nonattainment or maintenance area. This rule is based on federal control technique guidance documents.

R307-340-2. Applicability.
R307-340 applies to the owner or operator who applies surface coating of paper, fabric, vinyl, metal furniture, large appliance, magnet wire, flat wood, miscellaneous metal parts and products, and graphic arts in any ozone nonattainment or maintenance area.

R307-340-[~~1~~]3. [~~Applicability and~~]Definitions.
[~~(1) R307-325 establishes applicability and general requirements for R307-340.~~
~~(2)~~]The following additional definitions apply to R307-340:
"Air Dried Coating" means coatings [~~which~~]that are dried by the use of air or a forced warm air at temperatures up to 90 degrees C (194 degrees F).
"Application Area" means the area where the coating is applied by spraying, dipping, or flow coating techniques.
"Basecoat" means a primary flat wood coating or coloring of panels and normally should completely hide substrate characteristics.
"Capture System" means the equipment (including hoods, ducts, fans, etc.) used to contain, capture, or transport a pollutant to a control device.
"Class II Hard Board Paneling Finish" means finishes [~~which~~]that meet the specifications of voluntary product standards PS-9-73 as approved by the American National Standards Institute.
"Clear Coat" means a coating [~~which~~]that lacks color and opacity.
"Coating" means a protective, functional, or decorative film applied in a thin layer to a surface. This term often applies to paints such as lacquers or enamels, but is also used to refer to films applied to paper, plastics, or foil.
"Coating Application System" means all operations and equipment [~~which~~]that applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flash off areas, air dryers and ovens.
"Curtain Coating" means the application of a coating material to a wood substrate by means of a free-falling film of coating.
"Exterior Single Coat" means the same as topcoat but is applied directly to the metal substrate omitting the primer application.
"Extreme Performance Coatings" means coatings designed for harsh exposure or extreme environmental conditions.
"Fabric Coating" means the coating or saturation of a textile substrate with a knife, roll or rotogravure coater to impart

characteristics that are not initially present, such as strength, stability, water or acid repellency, or appearance.

"Filler" means a type of coating used to fill pores, voids, and cracks in wood to provide a smooth surface. It can also be used to accentuate the grain of natural hardwood veneers.

"Flat Wood Coating" means the surface coating of any flat wood products.

"Flexographic Printing" means the application of works, designs, and pictures to substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

"Groove Coat" means a flat wood coating [~~which~~]that covers grooves cut into the panel to assure that the grooves are compatible with the final surface color.

"Hardwood Plywood" means plywood whose surface layer is a veneer of hardwood.

"Ink" means a flat wood coating used to put a decorative design on printed panels. It can also produce special appearances on natural hardwood plywood.

"Interior Single Coat" means a single film of coating applied to internal parts of large appliances that are not normally visible to the user.

"Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a blade that spreads the coating evenly over the width of the substrate.

"Large Appliances" means doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other similar products.

"Low Organic Solvent Coating" means coatings [~~which~~]that contain less organic solvents than the conventional coatings used by industry. Low organic solvent coatings include water-borne, higher-solids, electrodeposition, and powder coatings.

"Magnet Wire Coating" means the process of applying coating of electrical insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

"Metal Furniture Coating" means the surface coating of any furniture made of metal or any metal part [~~which~~]that will be assembled with other metal, wood fabric, plastic, or glass parts to form a furniture piece.

"Natural Finish Hardwood Plywood Panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

"Packaging Rotogravure Printing" means rotogravure printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and labels.

"Paper Coating" means uniform distribution of coatings put on paper and pressure sensitive tapes regardless of substrate. Related web coating processes on plastic film and decorative

coatings on metal foil are included in this definition. Paper coating covers saturation operations as well as coating operations. (Saturation means dipping the web into a bath).

"Particle Board" means a manufactured board made of individual particles [~~which~~]that have been coated with a binder and formed into flat sheets by pressure.

"Pressure Head Coating" means the application of a coating material to a wood substrate by means of a pressure head coater where coating material is metered into a pressure head and forced through a calibrated slit between two knives.

"Prime Coat" means the first film of coating applied in a two-coat operation.

"Primer" means a flat wood coating used to protect the wood from moisture and to provide a good surface for further coating applications.

"Printed Interior Panels" means panels whose grain or natural surface is obscured by fillers or basecoats upon which a simulated grain or decorative pattern is printed.

"Publication of Rotogravure Printing" means rotogravure printing upon paper [~~which~~]that is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

"Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls.

"Roll Printing" means the application of words, designs and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

"Rotogravure Coating" means the application of a uniform layer of material across the entire width of the web to substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

"Rotogravure Printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique [~~which~~]that involves a recessed image area in the form of cells.

"Sealer" means a type of coating used to seal off substances in the wood [~~which~~]that may affect subsequent finishes as well as protect the wood from moisture.

"Single Coat" means a single film of coating applied directly to the metal substrate omitting the primer application.

"Specialty Printing Operations" means all gravure and flexographic operations [~~which~~]that print a design or image, excluding publication gravure and packaging gravure printing. Specialty printing operations include, among other things, printing on paper cups and plates, patterned gift wrap, wallpaper, and floor coverings.

"Stain" means a nonprotective flat wood coating [~~which~~]that colors the wood surface without obscuring the grain.

"Tile Board" means paneling that has a colored waterproof surface coating.

"Vinyl Coating" means applying a decorative or protective top coat, or printing on vinyl coated fabric or vinyl sheets.

R307-340-[~~2~~]4. General Provisions for Volatile Organic Compounds.

[~~(1) R307-340 applies to Volatile Organic Compounds used for surface coating of paper, fabric, vinyl, metal furniture, large appliances, magnet wire, flat wood paneling, miscellaneous metal parts and products, and graphic arts.~~]

[~~(2)~~](1) Fugitive emissions. Control techniques and work practices are to be implemented at all times to reduce VOC emissions from fugitive type sources. Control techniques and work practices include:

(a) tight fitting covers for open tanks;

(b) covered containers for solvent wiping cloths;

(c) collection hoods for areas where solvent is used for cleanup; and

(d) proper disposal of dirty cleanup solvent.

[~~(3)~~](2) Record keeping and reporting.

(a) The owner or operator of any source subject to R307-340 shall maintain:

(i) Records detailing all malfunctions affecting control equipment;

(ii) Records of all testing conducted under R307-340-[~~13~~]15;

(iii) Records of all monitoring conducted under R307-340-[~~13~~]15; and

(iv) Records of the daily use of all paints, stains, lacquers, solvents, and other materials [~~which~~]that may be a source of VOC emissions.

(v) The recording format shall, at a minimum, follow the guidance in EPA-340/1-88-003, "Recordkeeping Guidance Document for Surface Coating Operations and the Graphic Arts Industry", or the most recent EPA guidance, and shall contain all information necessary to determine compliance with emissions limits on a daily basis.

(b) The owner or operator shall:

(i) Install; operate; and maintain process or control equipment, or both; monitoring instruments or procedures; as necessary to comply with (2)(a) above; and

(ii) Maintain, in writing, data or reports, or both, relating to monitoring instruments or procedures to document, upon review, the compliance status of the VOC emission source or control equipment.

(c) Copies of all records and reports required by (2)(a) and (b) above shall be retained by the owner or operator for a minimum of two years after the date on which the record was made, and shall be made available to the executive secretary or representative upon verbal or written request.

(d) If add-on control equipment is used, in addition to the requirements of R307-340-[~~13~~]15(5), the following information, as determined applicable for each source by the executive secretary, shall be monitored and recorded daily in order to assure continuous compliance. The substitution of continuous recordings

of system operation for daily recordings may be allowed by the executive secretary. The required information pertains to the following systems:

(i) capture systems: fan power use, duct flow, and duct pressure.

(ii) carbon absorbers systems: bed temperature, bed vacuum pressure, pressure at the vacuum pump, accumulated time of operation, concentration of VOC in the outlet gas, and solvent recovery.

(iii) refrigeration systems: compressor discharge and suction pressures, condenser fluid temperature, and solvent recovery.

(iv) incinerator systems: exhaust gas temperature, temperature rise across a catalytic incinerator bed, flame temperature, and accumulated time of incineration.

[~~(4)~~](3) Malfunctions, Breakdowns, and Upsets. The owner or operator of a surface coating installation shall maintain a record of malfunctions, breakdowns, and upsets that result in excess VOC emissions. The record shall be kept for a calendar year and shall be submitted to the executive secretary by April 1 of the following year.

[~~(5)~~](4) Disposal of waste solvents. Waste solvents or waste materials [~~which~~]that contain solvents shall be disposed of by recycling, reclaiming or by incineration in an incinerator approved to process hazardous materials or by an alternate means approved by the executive secretary.

[~~(6)~~](5) Compliance Calculation Procedures.

(a) Compliance with R307-340 shall be determined on a daily basis. Sources may request approval for longer times for compliance determination from the executive secretary.

(b) Compliance calculation procedures shall follow the guidance of "Procedures for Certifying Quantity of Volatile [~~o~~]Organic Compounds Emitted by Paint, Ink, and other Coatings," EPA-450/3-84-019, or the most recent EPA guidance. Sources [~~which~~]that use add-on controls, or an approved alternative strategy instead of low solvent technology to meet the applicable emission limit, shall meet the equivalent VOC emission limit on the basis of solids applied (lbs. VOC/gallon solids applied, or lbs. VOC/lb. solids applied, for graphic arts sources).

R307-340-[~~3~~]5. Paper Coating.

(1) R307-340-[~~3~~]5 applies to roll, knife rotogravure coaters and drying ovens of paper coating operations.

(2) No owner or operator of a paper coating operation subject to R307-340-[~~3~~]5 may cause, allow or permit the discharge into the atmosphere of any VOC in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compounds, delivered to the coating application from a paper coating operation.

(3) Equivalency calculations for coatings should be performed in units of lbs. VOC/gallon of solid rather than lbs.

VOC/gallon of coating when determining compliance. The equivalent emission limit is 4.8 lbs. VOC/gallon of solid.

(4) The emission limit specified above shall be achieved by:

(a) The application of a low solvent technology coating; or

(b) Incineration, provided that a minimum of 90 percent of non-methane volatile organic compounds (VOC measured as total combustible carbon) [~~which~~]that enter the incinerator are oxidized to carbon dioxide and water; or

(c) Through carbon adsorption provided that there is a minimum of 90% reduction efficiency of captured VOC emissions.

(5) The design, operation, and efficiency of any capture system used in conjunction with (4) above shall be certified in writing by the owner or operator and approved by the executive secretary.

R307-340-[4]6. Fabric and Vinyl Coating.

(1) R307-340-[~~4~~]6 applies to roll, knife or rotogravure coaters and drying ovens of fabric and vinyl coating operations.

(2) No owner or operator of a fabric or vinyl coating line subject to this section may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of:

(a) 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compound, delivered to the coating applicator from a fabric coating line; or

(b) 0.45 kilograms per liter of coating (3.8 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compound, delivered to the coating applicator from a vinyl coating line.

(3) Equivalency calculations for coatings shall be performed in units of lbs. VOC/gallons of solids rather than lbs. VOC/gallon of coating when determining compliance. The equivalent emission limits shall be 4.8 lbs VOC/gallon solids for fabric coating, and 7.9 lbs VOC/gallon for vinyl coating.

(4) Organosol and plastisol coatings shall not be used to bubble emissions from vinyl printing and topcoating.

(5) The emission limitations specified above shall be achieved by:

(a) The application of a low solvent content coating technology; or

(b) Incineration, provided that a minimum of 90 percent of the non-methane volatile organic compounds (VOC measured as total combustible carbon) [~~which~~]that enter the incinerator are oxidized to carbon dioxide and water; or

(c) Through carbon adsorption provided that there is a minimum of 90 percent reduction efficiency of captured VOC emissions.

(6) The design, operation, and efficiency of any capture system used in conjunction with (5) above shall be certified in writing by the owner or operator and approved by the executive secretary.

R307-340-[~~5~~]7. Metal Furniture Coating VOC Emissions.

(1) R307-340-[~~5~~]7 applies to the application areas, flash-off areas, and ovens of metal furniture coating lines involved in prime and top-coat or single coat operations.

(2) No owner or operator of a metal furniture coating line subject to this section may cause, allow or permit the discharge into the atmosphere of any volatile organic compound in excess of 0.3 kilograms per liter of coating (3.0 pounds per gallon) excluding water and solvents exempt from the definition of volatile organic compounds, delivered to the coating applicator from prime and topcoat or single coat operations.

(3) Equivalency calculations for coatings shall be performed in units of lbs. VOC/gallon of solid rather than lbs. VOC/gallon of coating when determining compliance. The equivalent emission limit is 5.1 lbs. VOC/gallon solids.

(4) The emission limitation specified above shall be achieved by:

(a) The application of low solvent technology; or

(b) Incineration, provided that a minimum of 90 percent of the non-methane volatile organic compounds (VOC measured as total combustible carbon) [~~which~~]that enter the incinerator are oxidized to carbon dioxide and water; or

(c) using water-borne electrodeposition; or

(d) using water-borne spray, dip or flowcoat; or

(e) using powder; or

(f) using higher solids spray; or

(g) carbon adsorption.

(5) The design, operation, and efficiency of any capture system used in conjunction with (4) above shall be certified in writing by the owner or operator and approved by the executive secretary.

R307-340-[~~6~~]8. Large Appliance Surface Coating VOC Emissions.

(1) R307-340-[~~6~~]8 applies to application areas flash-off areas and ovens of large appliance coating lines involved in prime, single or top coating operations.

(2) No owner or operator of a large appliance coating line subject to this section may cause, allow or permit the discharge to the atmosphere of any volatile organic compounds in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compound, delivered to the coating applicator from prime, single, or top-coat coating operations.

(3) Equivalency calculations for coatings shall be performed in units of lbs. VOC/gallon of solid rather than lbs. VOC/gallon of coating when determining compliance. The equivalent emission limit is 4.5 lbs. VOC/gallon solids.

(4) The emission limitations specified above shall be achieved by:

(a) The application of low solvent content technology; or

(b) Incineration provided 90 percent of the non-methane

volatile organic compounds (VOC measured as total combustible carbon) [~~which~~]that enter the incinerator are oxidized to carbon dioxide and water; or

(c) using water-borne electrodeposition; or

(d) using water-borne spray, dip or flowcoat; or

(e) using powder; or

(f) using higher solids spray; or

(g) carbon adsorption.

(5) The design, operation, and efficiency or any capture system used in conjunction with (4) above shall be certified in writing by the owner or operator.

R307-340-[~~7~~]9. Magnet Wire Coating VOC Emissions.

(1) R307-340-[~~7~~]9 applies to ovens of magnet wire coating operations.

(2) No owner or operator of a magnet wire coating oven subject to this section may cause, allow or permit discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compound, delivered to the coating applicator from magnet wire coating operations.

(3) Equivalency calculations for coatings shall be performed in units of lbs. VOC/gallon of solid rather than lbs. VOC/gallon of coating when determining compliance. The equivalent emission limit is 2.2 lbs. VOC/gallon solids.

(4) The emission limitations specified above shall be achieved by:

(a) The application of low solvent content coating technology; or

(b) Incineration, provided that a minimum of 90 percent of the non-methane volatile organic compounds (VOC measured as total combustible carbon) [~~which~~]that enter the incinerator are oxidized to carbon dioxide and water; or

(5) The design, operation, and efficiency of any capture system used in conjunction with (4)(b) above shall be certified in writing by the owner or operator and approved by the executive secretary.

R307-340-[~~8~~]10. Flat Wood Coating.

(1) R307-340-[~~8~~]10 applies to the application areas of flat wood coating operations involved in but not limited to, filler, sealer, groove coat, primer, stain, basecoat, inks, and topcoat operations.

(2) No owner or operator of an interior printed hardwood, plywood, and particle board coating operation may cause, allow or permit discharge to the atmosphere of any organic volatile compound in excess of a weighted average VOC content of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator from, but not limited to, filler, sealer, groove coat, primer, stain, basecoat, ink and

topcoat operation.

(3) No owner or operator of a natural finish hardwood plywood coating operation may cause, allow or permit discharge to the atmosphere any organic volatile compound in excess of a weighted average VOC content of 0.40 kilograms per liter of coating (3.3 pounds per gallon) excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator from, but not limited to, filler, sealer, groove coat, primer, stain basecoat, ink and topcoat operations.

(4) No owner or operator of a Class II hardwood panel finish operation may cause, allow, or permit discharge to the atmosphere of any organic volatile compound in excess of a weighted average VOC content of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator from, but not limited to, filler, sealer, groove coat, primer, stain, basecoat, ink, and topcoat operations.

(5) The emission limitations specified above shall be achieved by:

(a) The application of low solvent technology; or

(b) The application of water-borne coating technology; or

(c) The application of ultraviolet-curable coating technology; or.

(6) This regulation does not apply to the manufacture of exterior siding, tile board, or particle board used as a furniture component.

(7) Equivalency calculations for coatings shall be performed in units of lbs. VOC/gallons of solid rather than lbs. VOC/gallons of coating when determining compliance. The equivalent emission limit for interior printed hardwood, plywood, and particle board coating is 2.2 lbs. VOC/gallon solids. The equivalent emission limit for natural finish hardwood plywood coating shall be 6.0 lbs. VOC/gallon solids. The equivalent emission limit for Class II hardwood panel finish operations is 4.5 lbs. VOC/gallon solids.

R307-340-[~~9~~]11. Miscellaneous Metal Parts and Products VOC Emissions.

(1) R307-340-[~~9~~]11 applies to the application areas, flash-off areas air and forced air dryers, and ovens used in the surface coating of miscellaneous metal parts and products:

(2) Applicable Industries:

(a) Large farm machinery (harvesting, fertilizing, planting, tractors, combines, etc.)

(b) Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.)

(c) Small appliance (fans, mixers, blenders, crock pots, vacuum cleaners, etc.)

(d) Commercial machinery (computers, typewriters, calculators, vending machines, etc.)

(e) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.)

(f) Fabricated metal products (metal covered doors, frames,

trailer frames, etc.)

(g) Any other industrial category [~~which~~]that coats metal parts or products under the standard Industrial Classification Code of major group 33 (primary metal industries), major group 34 (fabricated metal products), major group 35 (nonelectric machinery), major group 36 (electrical machinery), major group 37 (transportation equipment) major group 38 (miscellaneous instruments), and major group 39 (miscellaneous manufacturing industries).

(h) This regulation does not apply to:

(i) the surface coating of automobiles and light-duty trucks,

(ii) flat metal sheets and strips in the form of rolls or coils,

(iii) exterior of airplanes,

(iv) automobile refinishing,

(v) exterior of marine vessels,

(vi) customized top coating of automobiles and trucks if production is less than 35 vehicles per day,

(vii) a source whose potential VOC emissions are less than 10 tons/year. Potential emissions are based upon design capacity (or maximum production), and 8760 hours/year, before add-on controls. The potential emission level is determined on a plant-wide basis, summing all individual emission sources within the miscellaneous metal parts and products category.

(3) No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may cause, allow or permit discharge to the atmosphere of any volatile organic compounds in excess of:

(a) 0.52 kilograms per liter (4.3 pounds per gallon) of coating, excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator that applies clear coating;

(b) 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator in a coating application system that utilizes air or forced warm air at temperatures up to 90 degrees C (194 degrees F);

(c) 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator that applies extreme performance coatings;

(d) 0.36 kilograms per liter (3.0 pounds per gallon) of coating, excluding water and solvents exempt from the definition of volatile organic compound, delivered to a coating applicator for all other coating and coating application systems.

(4) Equivalency calculations for coatings shall be performed in units of lbs. VOC/gallon of solid rather than lbs. VOC/gallon of coating when determining compliance. The equivalent emission limit for air dried items is 6.7 lbs. VOC/gallon solids. The equivalent emission limit for clear-coated items is 10.3 lbs. VOC/gallon solids. The equivalent emission limit for extreme

performance coatings is 6.7 lbs. VOC/gallon solids. The equivalent emission limit for other coatings and systems is 5.1 lbs. VOC/gallon solids.

(5) If more than one emission limitation indicated in this section applies to a specific coating, then the least stringent emission limitation shall apply. All volatile organic compound emissions from solvent washing involved in a coating process shall be considered in the emission limitations set forth in R307-340-[~~9~~]11(3), unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(6) The emission limitations set forth in (3) above shall be achieved by:

(a) The application of low solvent technology; or

(b) An incineration system [~~which~~]that oxidizes a minimum of 90 percent of the non-methane volatile organic compounds (VOC measures as total combustible carbon) to carbon dioxide and water.

(7) The design, operation, and efficiency of any capture system used in conjunction with (6)(b) above shall be certified in writing by the owner or operator and approved by the executive secretary.

R307-340-[~~10~~]12. Graphic Arts.

(1) R307-340-[~~10~~]12 applies to: packaging and publication rotogravure; packaging and publication flexographic; and specialty printing operations employing solvents containing ink and having plant-wide potential emissions of volatile organic compounds (VOC) equal to or greater than 90 megagrams/yr (100 tons/yr). Potential emissions shall be calculated based on uncontrolled emissions operating at design capacity or at maximum production for 8760 hours/year. (Solvent shall include that used for dilution of ink and for equipment cleaning.) Machines [~~which~~]that have both coating units (application of a uniform layer of material across the entire width of a web) and printing units (formation of words, designs and pictures) shall be considered as performing a printing operation. This rule does not apply to offset lithography or letter press printing [~~which~~]that do not use volatile organic compounds.

(2) No owner or operator of a packaging and publication rotogravure; packaging and publication flexographic, and specialty printing operations employing solvent containing ink may operate, cause, or allow or permit the operation of a facility unless:

(a) The volatile fraction of ink, as it is applied to the substrate, contains 25.0 percent by volume or less of organic solvent and 75.0 percent by volume or more of water; or

(b) The ink as it is applies to the substrate, less water, contains 60.0 percent by volume or more nonvolatile material; or

(c) The owner or operator installs and operates;

(i) A carbon adsorption system [~~which~~]that reduces the volatile organic emissions from the capture system by a minimum of 90.0 percent by weight; or

(ii) An incineration system [~~which~~]that oxidizes a minimum of 90.0 percent of the non-methane volatile organic compounds (VOC

measured as total combustible carbon) to carbon dioxide and water.

(3) A capture system must be used in conjunction with the emission control systems indicated in this section. The design and operation of a capture system must be consistent with good engineering practices and shall be required to provide for an overall reduction in volatile organic compound emissions of at least:

(a) 75.0 percent where a publication rotogravure process is employed;

(b) 65.0 percent where a packaging rotogravure process is employed; or

(c) 60.0 percent where a flexographic printing process is employed.

R307-340-[~~11~~]13. Exemptions.

The requirements of R307-340-[~~1~~]3 through [~~8~~]10 shall not apply to the following:

(1) sources whose emissions of volatile organic compounds are not more than 6.8 kilograms (15 pounds) in any 24 hour period, nor more than 1.4 kilograms (3 pounds) in any one (1) hour provided the emission rates are certified. These cutoffs apply to the emissions level on a plant-wide basis, and are determined by summing emissions from all coating operations within the same regulated category[~~.~~];

(2) sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance provided;

(a) the operation of the source is not an integral part of the production process; and

(b) the emissions from the source do not exceed 363 kilograms (800 pounds) in any one calendar month. These cutoffs apply to the emissions level on a plant-wide basis, and are determined by summing emissions from all coating operations within the same regulated category.

R307-340-[~~12~~]14. Capture Systems.

The design, operation and efficiency of any capture system used in conjunction with any emission control system shall be certified in writing by the source owner or operator and approved by the executive secretary. Unless the capture system meets the requirements for a total enclosure, specified in section 60.713(b)(5)(i) of 40 CFR Part 60 Subpart SSS, or unless material balance techniques approved by the executive secretary are used to adequately determine overall VOC capture and destruction or recovery efficiency, the efficiency of the capture system will be determined by test methods approved by the executive secretary. Testing for capture efficiency shall be performed on a case-by-case basis as required by the executive secretary, and shall be consistent with EPA guidance. The requirements of R307-340-[~~2~~]4(3)(d) apply to the capture and control device system. When capture and control device efficiency must be independently determined, the overall VOC emission percent reduction equals

(percent capture efficiency x percent control device efficiency)/100.

R307-340-[~~13~~]15. Testing and Monitoring.

(1) Upon request by the executive secretary, the owner or operator of a volatile organic compound source required to comply with R307-340 shall demonstrate compliance by the method of this section or an alternative method approved by the executive secretary.

(2) Test procedures to determine compliance with R307-340 must be approved by the executive secretary and must utilize one of the following methods or an alternative method approved by the executive secretary or equivalent method.

(a) For surface coatings: EPA Reference Method 24 of 40 CFR Part 60

(b) For add-on control equipment: EPA Reference Methods 1 through 4, 18 and 25, of the 40 CFR Part 60;

(c) EPA 340/1-86-016 "A Guide for Surface Coating Calculations;" and

(d) EPA 450/3-84-019 "Procedures for Certifying Quantity of Volatile organic Compounds Emitted by Paint, Ink and Other Coatings."

(3) All tests shall be made by, or under the direction of, a person qualified by training or experience, or both, in the field of air pollution testing. The executive secretary will evaluate test data submitted.

(4) A person proposing to conduct a volatile organic compound emissions test shall notify the executive secretary of the intent to test not less than 30 days before the proposed initiation of the test. The notification shall contain the information required by, and be in a format approved by, the executive secretary.

(5) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

(a) Exhaust gas temperatures of all incinerators;

(b) Temperature rise across a catalytic incinerator bed;

(c) Breakthrough of VOC on a carbon adsorption unit; and

(d) Any other continuous monitoring or recording device required by the executive secretary.

(6) The executive secretary may accept, instead of the testing required in R307-340-[~~13~~]15, a certification by the manufacturer of the composition of the coatings if supported by actual batch formulation records. The owner or operator of a VOC source required to comply with R307-340 must obtain certification from the coating manufacturers that the test methods used for determination of the VOC content meet the requirements specified in (2) above. The owner or operator shall make this certification readily available to the Division of Air Quality to allow the results to be used in the daily compliance calculations specified in R307-340-[~~2(6)~~]4(5).

(7) The performance of add-on control equipment shall be demonstrated with the required test methods of (2) above at equipment start up and after any major modification to the control equipment. Baseline operating parameters shall be established during the satisfactory (i.e. in-compliance) operation of the control equipment, including operation during all anticipated ranges of process throughput. During subsequent process operation, the owner or operator shall maintain the operating conditions of the add-on controls as close to these baseline conditions as possible. If serious operational problems with an add-on control system are indicated by the daily monitoring required by R307-340-[~~2(3)~~]4(2)(d), (such problems may be indicated by changes from baseline conditions), repeat performance tests shall be performed by the owner or operator, and may be required by the executive secretary, as necessary.

(8) To determine compliance with the applicable standards in R307-340, samples shall be taken from the coating as freshly delivered to the reservoir of the coating applicator. All VOC emissions from solvent washing involved in a coating process shall be considered in determining compliance with an emission limit, unless the source owner or operator documents that the VOCs from solvent washing are collected and disposed of in a manner that prevents their evaporation into the atmosphere.

R307-340-16. Alternate Methods of Control.

(1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-340, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by R307-340 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, VOCs and nitrogen oxides will be measured by the test

methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

R307-340-16. Compliance Schedule.

All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, emission controls, surface coating[~~*~~], ozone
Date of Enactment or Last Substantive Amendment: [~~September 15, 1998~~]2006
Notice of Continuation: August 5, 2003
Authorizing, and Implemented or Interpreted Law: [~~19-2-101;~~] 19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-341. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: Cutback Asphalt.
R307-341-1. Purpose.
This rule establishes reasonably achievable control technology (RACT) requirements for the use or application of cutback asphalt in ozone nonattainment and maintenance areas.

R307-341-2. Applicability.
R307-341 applies to any person who uses or applies asphalt in any ozone nonattainment or maintenance area.

R307-341-[~~1~~]3. Definitions.
[~~(1) R307-325 establishes applicability and general requirements for R307-341.~~
~~(2)~~]The following additional definitions apply to R307-341:
"Asphalt or Asphalt Cement" means the dark brown to black cementitious material, either solid, semisolid or liquid in consistency, of which the main constituents are bitumens that occur naturally or as a residue of petroleum refining.
"Asphalt Concrete" means a waterproof and durable paving material composed of dried aggregate [~~which~~]that is evenly coated with hot asphalt cement.
"Cutback Asphalt" means any asphalt [~~which~~]that has been liquified by blending with petroleum solvents (diluents) or, in the case of some slow cure asphalts (road oils), which have been produced directly from the distillation of petroleum.
"Emulsified Asphalt" means asphalt emulsions produced by combining asphalt with water that contains an emulsifying agent.
"Patch Mix" means a mixture of an asphalt binder and aggregate in which cutback or emulsified asphalts are used either as sprayed liquid or as a binder.
"Penetrating Prime Coat" means an application of low-viscosity liquid asphalt to an absorbent surface in order to prepare it for paving with asphaltic concrete.

R307-341-[~~2~~]4. Limitations on [~~Content~~]Use of Cutback Asphalt.
[~~After December 31, 1982, n~~]No person shall cause, allow, or permit the use or application of cutback asphalt, or [~~an~~]emulsified asphalt containing more than 7 percent oil distillate, as determined by ASTM distillation test D-244, except as provided below:
(1) Where the use or application commences on or after October 1 of any year and such use or application is completed by April 30 of the following year;
(2) Where long-life (longer than 1 month) stockpile storage of patch mix is demonstrated to the executive secretary to be necessary;
(3) Where the asphalt is to be used solely as a penetrating prime coat;
(4) Where the user can demonstrate that there are no emissions of volatile organic compounds from the asphalt under

conditions of normal use;

(5) Where the use or application is for the paving of parking lots smaller than 300 parking stalls.

R307-341-[~~3~~]5. Recordkeeping.

[~~A record shall be kept for~~]Any person subject to R307-341 shall keep records for at least two years of the types and amounts of cutback[~~,~~] or emulsified asphalt used, [~~and~~]the amounts of solvents added, and the location where the asphalt is applied. The records shall be made available to the executive secretary upon request.

R307-341-6. Compliance Schedule.

All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, emission controls, asphalt, solvent[*]
Date of Enactment or Last Substantive Amendment: [~~September 15, 1998~~]2006
Notice of Continuation: August 5, 2003
Authorizing, and Implemented or Interpreted Law: [~~19-2-101,~~] 19-2-104(1)(a)

R307. Environmental Quality, Air Quality.
R307-342. [~~Davis, Salt Lake, Utah and Weber Counties and~~]Ozone Nonattainment and Maintenance Areas: Qualification of Contractors and Test Procedures for Vapor Recovery Systems for Gasoline Delivery Tanks.
R307-342-1. Purpose.

The purpose of R307-342 is to establish the requirements for the qualification of contractors to perform vapor tightness tests on gasoline transport vehicles equipped with vapor recovery equipment.

[~~R307-342-1. Testing Required Annually.~~

~~R307-328-6 requires that the gasoline delivery tanks and associated vapor recovery systems be tested for leakage at least annually by a qualified contractor approved by the executive secretary.~~

]
R307-342-2. [~~General~~]Applicability.

R307-342 is applicable to anyone who wishes to become qualified by the executive secretary to perform vapor tightness tests on gasoline transport [~~vessels which~~]vehicles that are required to be equipped with gasoline vapor recovery equipment and to be tested in accordance with R307-328-[~~6~~]7.

[
~~R307-342-3. General Requirements.~~

~~(1) A vapor recovery system is required on all gasoline delivery tanks loading at a terminal or nonexempt bulk plant or off loading at a stationary storage container in Davis, Salt Lake, Utah or Weber County or any ozone nonattainment area.~~

~~(2) The design of the vapor recovery system is to be such that when the delivery tank is connected to an approved storage tank vapor recovery system or loading terminal, 90% vapor recovery efficiencies are realized. The connectors of the delivery tanks need to be compatible with the fittings on the fill pipes and vapor vents at the storage containers and gasoline loading terminals where the delivery tank will service or be serviced. Adapters may be used to achieve compatibility.~~

~~(3) No person may operate a gasoline delivery tank in Davis, Salt Lake, Utah or Weber County or any ozone nonattainment area unless the tank is certified leak tight. The owner or operator of any delivery tank must insure that the tank is vapor tight according to the requirements of R307-328-6, by having the tank satisfactorily pass the test requirements described in these procedures or other procedures approved by the executive secretary when performed by a contractor who has been qualified by the executive secretary. Each tank must be certified at least annually.~~

~~(4) R307-328-6(3) requires, "the tank shall not sustain a pressure change of more than 750 pascals (3 inches of H_2O) in five minutes when pressurized (by air or inert gas) to 4500 pascals (18 inches of H_2O), or evacuated to 1500 pascals (6 inches of H_2O)" during the annual certification test for vapor tightness.~~

]

R307-342-[4]3. Contractor Qualification Requirements.

(1) [~~The executive secretary has determined that a~~]Any person may become qualified to perform delivery tank vapor tightness tests by:

(a) [~~P~~]preparing a written, detailed and approvable procedure by which the person proposes to conduct the pressure/vacuum test. The minimum test performance requirements are described in R307-342-[~~6~~]5 and R307-342-[~~7~~]6[~~.~~];

(b) [~~S~~]submitting the procedure with a letter requesting approval of the procedure and qualification of the person as a qualified testing contractor[~~.~~];

(c) [~~H~~]having the necessary facilities, equipment and expertise to perform a satisfactory test[~~.~~];and

(d) [~~P~~]performing an acceptable demonstration test with a representative of the executive secretary in attendance.

(2) The person determined qualified to perform the tests will be issued a letter of qualification by the executive secretary valid for one year.

(3) Re-qualification will be accomplished by:

(a) [~~R~~]requesting by letter to be requalified by the executive secretary; and

(b) [~~P~~]performing an acceptable demonstration test with a representative of the executive secretary in attendance after which a letter of requalification will be sent.

R307-342-[5]4. Equipment Requirements.

(1) Pressure Source. An air pump, shop compressed air, compressed gas tanks of air or inert gas, or other approved air pressure producing source or procedure sufficient to pressurize the tank to 18 inches of water above atmospheric pressure is required. Some models of reversible tank-type shop vacuum cleaners will perform adequately.

(2) Vacuum Source. A vacuum pump or other approved vacuum producing procedure capable of evacuating the tank to 6 inches of water is required. For example, some models of shop vacuum cleaners can accomplish this function.

(3) Pressure. [~~-~~]A [~~V~~]vacuum [~~S~~]supply [~~H~~]hose[~~. A hose~~]must be of sufficient length and wall strength to reach from the tank to the pressure vacuum source.

(4) Manometer. A liquid manometer or equivalent instrument must be capable of measuring up to 25 inches of water with scale division of 0.1 inches of water. A 1/4-inch hose to connect the manometer to the adapter tap is recommended.

(5) Stopwatch. A stopwatch with scale division to one second is required.

(6) Adapter. An adapter to connect the pressure vacuum hose to the tank with a shutoff valve to isolate the tank from the required pressure vacuum equipment is required. The adapter requires a shutoff valve, a tap to attach the manometer, and a bleed valve for adjusting pressure/vacuum to specified levels prior to start of timed period. However, each contractor must use

an adapter compatible with his equipment.

(7) Caps. Dust caps with good gaskets are required on all outlets during the test.

(8) Pressure/Vacuum Relief Valves. The test apparatus should be equipped with an in line pressure/vacuum relief valve set to activate at 25 inches of water above atmospheric and 12 inches of water below if the pressure/vacuum equipment has greater capacity than the set points to prevent possible tank damage.

R307-342-[~~6~~]5. Test Procedures and Preparations.

(1) Location. The delivery tank must be tested in a location where it will not be subject to direct sunlight. Shop heaters/air conditioners must be turned off during the test as they will affect the tank stability.

(2) Purging the Tank. A good purge is necessary.

(a) The tank must be emptied of gasoline and vapors before testing to minimize "vapor growth" problems. Hauling a load of diesel fuel is recommended.

(b) A steam purge to degas the tank is acceptable.

(c) An alternate method is to purge with a high volume of air. For this purge, the hatches are to be opened and purge air or inert gas should be blown through the tank for 30 minutes or more to degas the tank. This method is not as effective and often requires a much longer time for stabilization during the test.

(3) Visual Inspection. While the tank is being purged, or prior to the test, the entire tank should be visually inspected for evidence of wear, damage or misadjustments that could be a source of potential leaks. Areas to check are domes, dome vents, cargo tank piping, hose connections, hoses and delivery elbows. Any part found defective should be adjusted, repaired or replaced as necessary before the pressure test is started.

(4) Vents, Valves, and Outlets.

(a) The emergency valves in the bottom of the tank must be opened during the purge and then closed to test.

(b) Open the top vents. If the top vents are the pneumatic type, then a shop air line connection must be provided as the vents must be in the open position during the purge and then closed to test.

(c) In order to complete the test, some types of dome vents may have to be replaced.

(d) During the test, all compartments must be interconnected so that the tank may be tested as a single unit. If this cannot be done, each compartment must be tested as a separate tank.

(e) Dust caps with good gaskets must be installed on all outlets.

(5) Pretest Preparation and Procedure.

(a) Open and close each dome cover.

(b) Connect the static electric ground connections to tank, attach the liquid delivery and vapor return hoses, remove liquid delivery elbows and seal the liquid delivery hose fitting, install dust caps on all outlets except the vapor return hose.

(c) Attach the test adapter to the vapor return hose of the

tank under test with the shutoff valve closed.

(d) Connect the pressure supply hose to the adapter.

(e) Connect the 1/4-inch hose to the adapter tap and the manometer if applicable and position of the manometer or gauge at eye level.

(f) Open all internal vents and valves if possible. If not possible, each compartment must be tested as if each compartment was a separate tank.

(6) The Pressure Test.

(a) With all preparations complete, turn on the pressure source and open the shutoff valve in the adapter to apply air pressure slowly. Pressurize the tank to 18 inches of water.

(b) Close the shutoff valve and allow the pressure in the tank to stabilize. When the pressure has stabilized, read and record the time and initial pressure on the manometer.

(c) Allow five minutes to elapse, then read and record the final time and pressure.

(d) Disconnect the pressure source from the adapter and slowly open the shutoff valve to bring the tank to atmospheric pressure.

(e) Subtract the final pressures from the initial pressures.

(f) If the sustained pressure drop is greater than 3.0 inches of water, repair the leaks and then repeat the steps in (a) through (e).

(g) Repeat the steps in (a) through (f) until the change in pressure for two consecutive runs agrees within 1/2 inch of water. Calculate the arithmetic average of the two results.

(7) The Vacuum Test.

(a) Connect the vacuum source to the adapter. Start the vacuum source and slowly open the shutoff valve to evacuate the tank to six inches of water and close the shutoff valve.

(b) Allow the pressure in the tank to stabilize, adjust as necessary to maintain six inches of water vacuum until the pressure stabilizes.

(c) Read and record the time and the initial vacuum reading on the manometer. Allow five minutes to elapse, then read and record the final manometer reading.

(d) Disconnect the vacuum source from the adapter, and slowly open the shutoff valve to bring the tank to atmospheric pressure.

(e) Subtract the final reading from the initial reading.

(f) If the sustained vacuum loss is greater than three inches of water, the leakage source must be located and repaired. The steps in (a) through (e) must be repeated.

(g) Repeat the steps in (a) through (f) until the change in vacuum for two consecutive runs agree within 1/2 inches of water. Calculate the arithmetic average of the two results.

(8) When the calculated average pressure change in five minutes for both the pressure test and the vacuum test are three inches of water or less, the requirements of the test are satisfied and the tested tank may be certified leak tight.

R307-342-[~~7~~]6. Certification of a Delivery Tank.

(1) The approved contractor will upon satisfactory completion of the vapor tightness test complete the documentation of certification in two copies. If desired, each contractor may prepare his own certificate as long as the following items are included:

(a) Gasoline delivery tank pressure test.
(b) Tank owner and address.
(c) Tank ID number.
(d) Testing location.
(e) Date of test.
(f) Tester name and signature.
(g) Company or affiliation of testers.
(h) Test data results.
(i) Date of next required test.

(2) The contractor will keep one copy [~~which~~]that will be made available for inspection by the executive secretary for two years. The tank owner or operator will keep the other copy of the certification with the delivery tank for two years for inspection by the executive secretary.

(3) The approved contractor will mark the certified tank below the DOT test marking with "V.R. TESTED" followed by the month and year of the current certified test. The vapor recovery test marking shall be at least 1-1/4" high black permanent letters on a white background. The letters and numbers must be of a type that will remain legible from a distance of 20 feet for at least one year (painted or printed sticker is acceptable).

R307-342-7. Alternate Methods of Control.

(1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-342, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by R307-342 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the

owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, volatile organic compounds and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

KEY: air pollution, ozone, gasoline transport[~~*~~]
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R307. Environmental Quality, Air Quality.
R307-343. [~~Davis and Salt Lake Counties and~~]Ozone Nonattainment and Maintenance Areas: Emissions Standards for Wood Furniture Manufacturing Operations.
R307-343-1. Purpose.

(1) The purpose of R307-343 is to limit volatile organic compound emissions from wood furniture manufacturing sources located in[~~Davis and Salt Lake Counties and~~] ozone nonattainment or maintenance areas.

R307-343-2. Applicability.

Provisions of R307-343 apply to each wood furniture manufacturing source that is not an incidental wood furniture manufacturer, has the potential to emit 25 tons or more per year of volatile organic compounds and is located in [~~Salt Lake County, Davis County, or~~] any ozone nonattainment or maintenance area.

R307-343-3. Definitions.

The following additional definitions apply to R307-343:

"Affected Source" means a wood furniture manufacturing source that meets the criteria in R307-343-2.

"Alternat[~~iv~~]e Method" means any method of sampling and analyzing for an air pollutant that is not a reference or equivalent method but that has been demonstrated to the executive secretary's satisfaction to, in specific cases, produce results adequate for a determination of compliance.

"As Applied" means the volatile organic compound and solids content of the finishing material that is actually used for coating the substrate. It includes the contribution of materials used for in-house dilution of the finishing material.

"Basecoat" means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials, and is usually topcoated for protection.

"Capture Device" means a hood, enclosed room, floor sweep, or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a pollution control device such as an incinerator or carbon adsorber.

"Capture Efficiency" means the fraction of all organic vapors generated by a process that is directed to a control device.

"Certified Product Data Sheet(CPDS)" means documentation furnished by a coating supplier or an outside laboratory that provides the volatile organic compound content by percent weight, the solids content by percent weight, and the density of a finishing material, strippable booth coating, or solvent, measured using EPA Method 24 or an equivalent or alternat[~~iv~~]e method, or formulation data if the coating meets the criteria specified in R307-343-7(1). The purpose of the CPDS is to assist the affected source in demonstrating compliance with the emission limitations presented in Subsection R307-343-4.

"Cleaning Operations" means operations in which organic solvent is used to remove coating materials from equipment used in

wood furniture manufacturing operations.

"Coating" means a protective, decorative, or functional material applied in a thin layer to a surface. Such materials may include paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, inks, and temporary protective coatings.

"Compliant Coating" means a finishing material or strippable booth coating that meets the emission limits specified in R307-343-4(1).

"Continuous Coater" means a finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor system. Finishing materials that are not transferred to the part are recycled to the finishing material reservoir. Several types of application methods can be used with a continuous coater including spraying, curtain coating, roll coating, dip coating, and flow coating.

"Continuous Compliance" means that the affected source meets the emission limitations and other requirements of R307-343 at all times and fulfills all monitoring and recordkeeping provisions of R307-343 in order to demonstrate compliance.

"Control Device" means any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Control devices include, but are not limited to, incinerators, carbon adsorbers, and condensers.

"Control Device Efficiency" means the ratio of the pollution released by a control device and the pollution introduced to the control device, expressed as a fraction.

"Control System" means the combination of capture and control devices used to reduce emissions to the atmosphere.

"Conventional Air Spray" means a spray coating method in which the coating is atomized by mixing it with compressed air at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization. Airless, air assisted airless spray technologies, and electrostatic spray technology are not considered conventional air spray.

"Day" means a period of 24 consecutive hours beginning at midnight local time, or beginning at a time consistent with a source's operating schedule.

"Emission" means the direct or indirect release or discharge of volatile organic compound into the ambient air.

"Equipment Leak" means emissions of volatile organic compounds from pumps, valves, flanges, or other equipment used to transfer or apply finishing materials or organic solvents.

"Equivalent Method" means any method of sampling and analyzing for an air pollutant that has been demonstrated to the executive secretary's satisfaction to have a consistent and quantitatively known relationship to the reference method under specific conditions.

"Finishing Application Station" means the part of a finishing operation where the finishing material is applied, such as a spray booth.

"Finishing Material" means a coating used in the wood

furniture industry, including basecoats, stains, washcoats, sealers, and topcoats.

"Finishing Operation" means those activities in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

"Incidental wood furniture manufacturer" means a major source as defined in 40 CFR 63.2 that is primarily engaged in the manufacture of products other than wood furniture or wood furniture components and that uses no more than 100 gallons per month of finishing material in the manufacture of wood furniture or wood furniture components.

"Incinerator" means an enclosed combustion device that thermally oxidizes volatile organic compounds to carbon monoxide and carbon dioxide. This term does not include devices that burn municipal or hazardous waste material.

"Noncompliant Coating" means a finishing material or strippable booth coating that has a volatile organic compound content greater than the emission limitation specified in Subsection R307-343-4(1).

"Normally Closed Container" means a container that is closed unless an operator is actively engaged in activities such as emptying or filling the container.

"Operating Parameter Value" means a minimum or maximum value established for a control device or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit.

"Organic Solvent" means a liquid containing volatile organic compounds that is used for dissolving or dispersing constituents in a coating, adjusting the viscosity of a coating, cleaning, or washoff. When used in a coating, the organic solvent evaporates during drying and does not become a part of the dried film.

"Overall Control Efficiency" means the efficiency of a control system, calculated as the product of the capture and control device efficiencies, expressed as a percentage.

"Permanent Total Enclosure" means a permanently installed enclosure that completely surrounds a source of emissions such that all emissions are captured and contained for discharge through a control device, and [~~which~~]that meets the criteria presented in Subsection R307-343-7(5)(a)(i) through (iv).

"Reference Method" means any method of sampling and analyzing for an air pollutant that is published in Appendix A of 40 CFR 60.

"Responsible Official" has the same meaning as in R307-415, Operating Permit Requirements.

"Sealer" means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. A washcoat used to optimize aesthetics is not a sealer.

"Solids" means the part of the coating that remains after the coating is dried or cured; solids content is determined using data from EPA Method 24, or an alternat[~~iv~~]e or equivalent method approved by the executive secretary.

"Solvent" means a liquid used in a coating for dissolving or

dispersing constituents in a coating, adjusting the viscosity of a coating, cleaning, or washoff. When used in a coating, it evaporates during drying and does not become a part of the dried film.

"Stain" means any color coat having a solids content by weight of no more than 8.0 percent that is applied in single or multiple coats directly to the substrate, including nongrain raising stains, equalizer stains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.

"Strippable Booth Coating" means a coating that:

(1) is applied to a booth wall to provide a protective film to receive overspray during finishing operations;

(2) is subsequently peeled off and disposed; and

(3) by achieving (1) and (2), reduces or eliminates the need to use organic solvents to clean booth walls.

"Substrate" means the surface onto which coatings are applied, or into which coatings are impregnated.

"Temporary Total Enclosure" means an enclosure that meets the requirements of Subsection R307-343-7(5)(a)(i) through (iv) and is not permanent, but is constructed only to measure the capture efficiency of pollutants emitted from a given source. Additionally, any exhaust point from the enclosure shall be at least 4 equivalent duct or hood diameters from each natural draft opening.

"Topcoat" means the last film-building finishing material applied in a finishing system. Non-permanent final finishes are not topcoats.

"Touch-up and Repair" means the application of finishing materials to cover minor finishing imperfections.

"Washcoat" means a transparent special purpose coating having a solids content by weight of 12.0 percent or less that is applied over initial stains to protect and control color and to stiffen the wood fibers in order to aid sanding.

"Washoff Operations" means those operations in which organic solvent is used to remove coating from a substrate.

"Wood Furniture" means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured under any of the following standard industrial classification codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712.

"Wood Furniture Manufacturing Operations" means the finishing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

"Working Day" means a day, or any part of a day, in which a source is engaged in manufacturing.

R307-343-4. Emission Standards.

(1) Each owner or operator of an affected source subject to R307-343 shall limit volatile organic compound emissions from finishing operations. Methods in (a) through (e) below are accepted.

(a) Use topcoats with a volatile organic compound content no

greater than 0.8 kilogram per kilogram of solids, as applied; or

(b) Use a finishing system of sealers with a volatile organic compound content no greater than 1.9 kilograms per kilogram of solids, as applied, and topcoats with a volatile organic compound content no greater than 1.8 kilograms per kilogram of solids, as applied; or

(c) For affected sources using acid-cured alkyd amino vinyl sealers or acid-cured alkyd amino conversion varnish topcoats, use sealers and topcoats based on the following criteria:

(i) If the affected source is using acid-cured alkyd amino vinyl sealers and acid-cured alkyd amino conversion varnish topcoats, the sealer shall contain no more than 2.3 kilograms of volatile organic compound per kilogram of solids, as applied, and the topcoat shall contain no more than 2.0 kilograms of volatile organic compound per kilogram of solids, as applied;

(ii) If the affected source is using a sealer other than an acid-cured alkyd amino vinyl sealer and acid-cured alkyd amino conversion varnish topcoats, the sealer shall contain no more than 1.9 kilograms of volatile organic compound per kilogram of solids, as applied, and the topcoat shall contain no more than 2.0 kilograms of volatile organic compound per kilogram of solids, as applied; or

(iii) if the affected source is using an acid-cured alkyd amino vinyl sealer and a topcoat other than an acid-cured alkyd amino conversion varnish topcoat, the sealer shall contain no more than 2.3 kilograms of volatile organic compound per kilogram of solids, as applied, and the topcoat shall contain no more than 1.8 kilograms of volatile organic compound per kilogram of solids, as applied; or

(d) Use a control system that will achieve an equivalent reduction in emissions as the requirements of Subsection R307-343-4(1)(a) or (b), as calculated using the compliance provisions in R307-343-6(2), as appropriate; or

(e) Use a combination of the methods presented in (a) through (d) above.

(2) Each owner or operator of an affected source subject to R307-343 shall limit volatile organic compound emissions from cleaning operations when using a strippable booth coating. A strippable booth coating shall contain no more than 0.8 kilogram of volatile organic compound per kilogram of solids, as applied.

R307-343-5. Work Practice Standards.

(1) Work Practice Implementation Plan.

(a) Each owner or operator of an affected source subject to R307-343 shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the topics specified in R307-343-5(2) through (10).[~~ The plan shall be completed no later than August 1, 1999.~~] The owner or operator of the affected source shall comply with each provision of the work practice implementation plan. The written work practice implementation plan shall be available for

inspection by the executive secretary, upon request. If the executive secretary determines that the work practice implementation plan does not adequately address each of the topics specified in (2) through (10) below or that the plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the executive secretary may require the affected source to modify the plan.

(2) Operator Training.

(a) Each owner or operator of an affected source shall train new and existing personnel, including contract workers, who are involved in finishing, gluing, cleaning, or washoff operations, use of manufacturing equipment, or implementation of the requirements of R307-343. All new personnel, those hired after June 2, 1999, shall be trained upon hiring. All existing personnel, those hired before June 2, 1999, shall be trained by December 4, 1999. All personnel shall be given refresher training annually.

(b) The affected source shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:

(i) A list of all current personnel by name and job description that are required to be trained;

(ii) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;

(iii) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and

(iv) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion and a record of the training date for all personnel.

(3) Leak Inspection and Maintenance Plan. Each owner or operator of an affected source shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:

(a) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply finishing materials, or organic solvents;

(b) An inspection schedule;

(c) Methods for documenting the date and results of each inspection and any repairs that were made;

(d) The time elapsed between identifying the leak and making the repair, using at a minimum the following schedule:

(i) A first attempt at repair, such as tightening of packing glands, shall be made no later than five working days after the leak is detected; and

(ii) Final repairs shall be made within 15 working days, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

(4) Cleaning and Washoff Solvent Accounting System. Each owner or operator of an affected source shall develop an organic solvent accounting form to record:

(a) The quantity and type of organic solvent used each month for washoff and cleaning;

(b) The number of pieces washed off each month, and the reason for the washoff; and

(c) The net quantity of spent organic solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite. The net quantity of spent solvent is equivalent to the total amount of organic solvent that is generated from the activity minus any organic solvent that is reused onsite for operations other than cleaning or washoff and any organic solvent that was sent offsite for disposal.

(5) Spray Booth Cleaning. Each owner or operator of an affected source shall not use compounds containing more than 8.0 percent by weight of volatile organic compound for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.

(6) Storage Requirements. Each owner or operator of an affected source shall use normally closed containers for storing finishing, cleaning, and washoff materials.

(7) Application Equipment Requirements. Each owner or operator of an affected source shall use conventional air spray guns for applying finishing materials only under any of the following circumstances:

(a) To apply finishing materials that have a volatile organic compound content no greater than 1.0 kilogram per kilogram of solids, as applied;

(b) For touch-up and repair under the following circumstances:

(i) The touchup and repair occurs after completion of the finishing operation; or

(ii) The touchup and repair occurs after the application of stain and before the application of any other type of finishing material, and the materials used for touchup and repair are applied from a container that has a volume of no more than 2.0 gallons.

(c) When the spray gun is aimed and triggered automatically, not manually;

(d) When the emissions from the finishing application station are directed to a control device;

(e) The conventional air gun is used to apply finishing materials and the cumulative total usage of that finishing material is no more than 5.0 percent of the total gallons of finishing material used during that semiannual reporting period; or

(f) The conventional air gun is used to apply stain on a part for which it is technically or economically infeasible to use any other spray application technology. The affected source shall demonstrate technical or economic infeasibility by submitting to the executive secretary a videotape, a technical report, or other documentation that supports the affected source's claim of technical or economic infeasibility. The following criteria shall be used, either independently or in combination, to support the affected source's claim of technical or economic infeasibility:

(i) The production speed is too high or the part shape is too complex for one operator to coat the part and the application station is not large enough to accommodate an additional operator; or

(ii) The excessively large vertical spray area of the part makes it difficult to avoid sagging or runs in the stain.

(8) Line Cleaning. Each owner or operator of an affected source shall pump or drain all organic solvent used for line cleaning into a normally closed container.

(9) Gun Cleaning. Each owner or operator of an affected source shall collect all organic solvent used to clean spray guns into a normally closed container.

(10) Washoff Operations. Each owner or operator of an affected source shall control emissions from washoff operations by using normally closed tanks for washoff and minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

R307-343-6. Compliance Procedures and Monitoring Requirements.

(1) Methodology. Terms and equations required in the calculation of compliance are found in Appendix B, "Control of Organic Compound Emissions from Wood Furniture Manufacturing Operations." EPA-453/R-96-007, April 1996. The terms found in B.3(b) on pages B-10 and B-11, Equation 3 on page B-18, Equations 4, 5, 6, and 7 on pages B-26 and B-27 are hereby adopted and incorporated by reference. Copies are available at the Division of Air Quality, the Division of Administrative Rules and most state depository libraries.

(2) General Compliance. The owner or operator of an affected source subject to the emission standards in Section R307-343-4 shall demonstrate compliance with those provisions by using any of the methods in (a) or (b) below.

(a) To demonstrate compliance with emission standards in R307-343-4(1)(a), (b), or (c) or R307-343-4(2), maintain certified product data sheets for each of these finishing materials and strippable booth coatings. If solvent or other volatile organic compound is added to the finishing material before application, the affected source shall maintain documentation showing the volatile organic compound content of the finishing material as applied, in kilograms of volatile organic compound per kilogram of solids.

(b) To comply through the use of a control system as specified in R307-343-4(1)(d):

(i) Determine the overall control efficiency needed to demonstrate compliance using Equation 3.

(ii) Document that the amount of volatile organic compound in Equation 3 is obtained from the volatile organic compound and solids content of the finishing material as applied;

(iii) Calculate the overall efficiency of the control device, using the procedures in R307-343-7(4) or (5), and demonstrate that the overall efficiency of the control device calculated by Equation 6 is equal to or greater than the overall efficiency of the control device calculated by Equation 3.

(3) Initial Compliance. The owner or operator of each affected source shall demonstrate compliance by submitting an initial compliance status report.

(a) Each owner or operator of an affected source that complies through the procedures established in (2)(a) above shall submit an initial compliance status report stating that compliant sealers, topcoats and strippable booth coatings are being used by the affected source.

(b) Each owner or operator of an affected source that complies by using the procedures in R307-343-6(2)(a) and applies sealers or topcoats using continuous coaters shall:

(i) Submit an initial compliance status report stating that compliant sealers or topcoats, as determined by the volatile organic compound content of the finishing material in the reservoir and the volatile organic compound content as calculated from records, are used; or

(ii) Submit an initial compliance status report stating that compliant sealers or topcoats, as determined by the volatile organic compound content of the finishing material in the reservoir, are used and the viscosity of the finishing material in the reservoir is being monitored. The affected source also shall provide data that demonstrates the correlation between the viscosity of the finishing material and the volatile organic compound content of the finishing material in the reservoir.

(c) Each owner or operator of an affected source using a control system, capture device or control device to comply with the requirements of R307-343, as allowed by R307-343-4(1)(d) and R307-343-6(2)(b), shall:

(i) Submit a monitoring plan that identifies the operating parameter to be monitored for the capture device and demonstrates why the parameter is appropriate to show ongoing compliance;

(ii) Conduct an initial performance test using the procedures and test methods listed in R307-343-7(3) and (4) or (5);

(iii) Calculate the overall control efficiency using Equation 6; and

(iv) Determine those operating conditions that are critical to determining compliance and establishing operating parameters that will ensure compliance with the standard, as follows:

(A) For a thermal incinerator, use minimum combustion temperature;

(B) For a catalytic incinerator equipped with a fixed

catalyst bed, use the minimum gas temperature both upstream and downstream of the catalyst bed,

(C) For a catalytic incinerator equipped with a fluidized catalyst bed, use the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed;

(D) For a carbon adsorber, use either the total regeneration mass stream flow for each regeneration cycle and the carbon bed temperature after each regeneration, or the concentration level of organic compounds exiting the adsorber, unless the owner or operator requests and receives approval from the executive secretary to establish other operating parameters;

(E) For a control device not listed in (A) through (D) above, the operating parameter shall be established using the procedures in R307-343-6(4)(c)(vi).

(v) Each owner or operator complying with R307-343-6(3)(c) shall calculate the site-specific operating parameter value as the arithmetic average of the maximum or minimum operating parameter values, as appropriate, that demonstrate compliance with the standards, during the three test runs required by R307-343-7(3)(a).

(d) Each owner or operator of an affected source subject to the work practice standards in R307-343-5 shall submit an initial compliance status report, as required by R307-343-9(2), stating that the work practice implementation plan has been developed and procedures have been established for implementing the provisions of the plan.

(4) Continuous Compliance Demonstrations.

(a) Each owner or operator of an affected source subject to the provisions of R307-343-4 that comply using the procedures established in R307-343-6(2)(a) shall demonstrate continuous compliance by using compliant materials, maintaining records that demonstrate the materials are compliant, and submitting a compliance certification with the semiannual report required by R307-343-9(3).

(i) The compliance certification shall state that compliant sealers, topcoats and strippable booth coatings have been used during the semiannual reporting period, or should otherwise identify the days of noncompliance and the reasons for noncompliance.

(ii) The compliance certification shall be signed by a responsible official.

(b) Each owner or operator of an affected source subject to the provisions of R307-343-4 that comply using the procedures established in R307-343-6(2)(a) and applies sealers or topcoats using continuous coaters shall demonstrate continuous compliance by following the procedures in (i) or (ii) below.

(i) Use compliant materials, as determined by the volatile organic compound content of the finishing material in the reservoir and the volatile organic compound content as calculated from records, and submit a compliance certification with the semiannual report required by R307-343-9(3).

(A) The compliance certification shall state that compliant

sealers and topcoats have been used during the semiannual reporting period, or should otherwise identify the days of noncompliance and the reasons for noncompliance.

(B) The compliance certification shall be signed by a responsible official.

(ii) Use compliant materials, as determined by the volatile organic compound content of the finishing material in the reservoir, maintaining a viscosity of the finishing material in the reservoir that is no less than the viscosity of the initial finishing material by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial finishing material and retesting the material in the reservoir each time solvent is added, maintaining records of solvent additions, and submitting a compliance certification with the semiannual report required by R307-343-9(3).

(A) The compliance certification shall state that compliant sealers and topcoats, as determined by the volatile organic compound content of the finishing material in the reservoir, have been used during the semiannual reporting period. Additionally, the certification shall state that the viscosity of the finishing material in the reservoir has not been less than the viscosity of the initial finishing material, that is, the material that is initially mixed and placed in the reservoir, during the semiannual reporting period.

(B) The compliance certification shall be signed by a responsible official.

(C) An affected source is in violation of the standard when a sample of the finishing material as applied exceeds the applicable limit established in R307-343-4(1)(a), (b), or (c), as determined using EPA Method 24 or an alternat[~~iv~~]e or equivalent method, or the viscosity of the finishing material in the reservoir is less than the viscosity of the initial finishing material.

(c) Each owner or operator of an affected source subject to the provisions of R307-343-4 that complies using a control system, capture device or control device shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to manufacturers specifications.

(i) Where a capture or control device is used, a device to monitor the site-specific operating parameter established in accordance with R307-343-6(3)(c)(i) is required.

(ii) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to determine the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

(iii) Where a carbon adsorber is used, one of the following monitoring devices shall be used:

(A) An integrating regeneration stream flow monitoring device having an accuracy of plus or minus 10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device having an accuracy of plus or minus one percent of the temperature being monitored expressed in degrees Celsius, or plus or minus 0.5 C, whichever is greater, capable of recording the carbon bed temperature after each regeneration and within fifteen minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the executive secretary as allowed under (vi) below.

(iv) Each owner or operator of an affected source shall not operate the capture or control device at a daily average value greater than or less than the operating parameter value, as defined in the plan required by R307-343-6(3)(c)(i). The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

(v) Each owner or operator of an affected source that complies through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

(vi) An owner or operator using a control device not listed in R307-343-6(3)(c) shall submit to the executive secretary a description of the device, test data verifying the performance of the device, and appropriate operating parameter values that will be monitored to demonstrate continuous compliance with the standard. Use of this device to demonstrate compliance is subject to the executive secretary's approval.

(d) Each owner or operator of an affected source subject to the work practice standards in R307-343-5 shall demonstrate continuous compliance by following the work practice implementation plan and submitting a compliance certification with the semiannual report required by R307-343-9(3).

(i) The compliance certification shall state that the work practice implementation plan was followed, or should otherwise identify the periods of noncompliance with the work practice standards.

(ii) The compliance certification shall be signed by a responsible official.

R307-343-7. Performance Test Methods.

(1) The EPA Method 24 (40 CFR 60) shall be used to determine the volatile organic compound content and the solids content by weight of the finishing materials as supplied by the manufacturer. The owner or operator of the affected source may request approval from the executive secretary to use an alternat[~~iv~~]e or equivalent method for determining the volatile organic compound content of the finishing material. Batch formulation information may be accepted by the executive secretary if the source demonstrates that a finishing material does not release volatile organic compound reaction byproducts during the cure. If the EPA Method 24 value is higher than the source's formulation data, the EPA Method 24 test shall govern. Sampling procedures shall follow the guidelines in "Standard Procedures for Collection of Coating and Ink Samples for volatile organic compound Content Analysis by Reference Method 24 and Reference Method 24A," EPA-340/1-91-010.

(2) Each owner or operator using a control system to demonstrate compliance shall determine the overall control efficiency of the control system as the product of the capture and control device efficiencies, using the test methods cited in (3) below and the procedures in (4) or (5) below.

(3) Each owner or operator using a control system shall demonstrate initial compliance using the procedures in (a) through (f) below.

(a) The EPA Method 18, 25, or 25A shall be used to determine the volatile organic compound concentration of gaseous air streams. The test shall consist of three separate runs, each lasting a minimum of 30 minutes.

(b) The EPA Method 1 or 1A shall be used for sample and velocity traverses.

(c) The EPA Method 2, 2A, 2C, or 2D shall be used to measure velocity and volumetric flow rates.

(d) The EPA Method 3 shall be used to analyze the exhaust gases.

(e) The EPA Method 4 shall be used to measure the moisture in the stack gas.

(f) The EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(4) Each owner or operator using a control system to demonstrate compliance with R307-343 shall use the procedures in (a) through (f) below.

(a) Construct the overall volatile organic compound control system so that volumetric flow rates and volatile organic compound concentrations can be determined by the test methods specified in R307-343-7(3);

(b) Measure the capture efficiency from the affected emission points by capturing, venting, and measuring all volatile organic compound emissions from the affected emission points. To measure the capture efficiency of a capture device located in an area with nonaffected volatile organic compound emission points, the affected emission points shall be isolated from all other volatile organic compound sources by one of the following methods:

(i) Build a temporary total enclosure around the affected

emission points;

(ii) Shut down all nonaffected volatile organic compound emission points and continue to exhaust fugitive emissions from the affected emission points through any building ventilation system and other room exhausts such as drying ovens. All exhaust air must be vented through stacks suitable for testing; or

(iii) Use another methodology approved by the executive secretary provided it complies with the EPA criteria for acceptance under 40 CFR Part 63, Appendix A, Method 301.

(c) Operate the control system with all affected emission points connected and operating at maximum production rate;

(d) Determine the efficiency of the control device using Equation 4;

(e) Determine the efficiency of the capture system using Equation 5;

(f) Compliance is demonstrated if the overall control efficiency in Equation 6 is greater than or equal to the overall control efficiency calculated by Equation 3, in accordance with R307-343-6(2)(b)(i).

(5) An alternat[~~iv~~]e to the compliance method presented in (4) above is the installation of a permanent total enclosure.

(a) Each affected source that complies using a permanent total enclosure shall demonstrate that the total enclosure meets the following requirements:

(i) The total area of all natural draft openings shall not exceed five percent of the total surface area of the enclosure's walls, floor, and ceiling;

(ii) All sources of emissions within the enclosure shall be a minimum of four equivalent diameters away from each natural draft opening;

(iii) Average inward face velocity (FV) across all natural draft openings shall be a minimum of 3,600 meters per hour or 200 feet per minute as determined by the following procedures:

(A) All forced makeup air ducts and all exhaust ducts are constructed so that the volumetric flow rate in each can be accurately determined by the test methods and procedures specified in (3)(b) and (3)(c) above. Volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(B) Determine face velocity by Equation 7:

(iv) All access doors and windows whose areas are not included as natural draft openings and are not included in the calculation of face velocity shall be closed during routine operation of the process.

(b) Determine the control device efficiency using Equation 4, and the test methods and procedures specified in R307-343-7(3).

(c) For a permanent total enclosure, the capture efficiency in Equation 5 is equal to one.

(d) For owners or operators using a control system to comply with the provisions of R307-343, compliance is demonstrated if:

(i) The capture efficiency of the enclosure is determined to equal one; and

(ii) The overall efficiency of the control system calculated by Equation 6 in accordance with (4) above is greater than or equal to the overall efficiency of the control system calculated by Equation 3 in accordance with R307-343-6(2)(b).

R307-343-8. Recordkeeping Requirements.

(1) The owner or operator of an affected source subject to the emission limits in R307-343-4 shall maintain records of the following:

(a) A certified product data sheet for each finishing material and strippable booth coating subject to the emission limits in R307-343-4;

(b) The volatile organic compound content, kilograms of volatile organic compound per kilogram of solids, as applied, of each finishing material and strippable booth coating subject to the emission limits in R307-343-4, and copies of data sheets documenting how the as applied values were determined.

(2) The owner or operator of an affected source following the compliance procedures of R307-343-6(4)(b) shall maintain the records required by (1) above and records of solvent and finishing material additions to the continuous coater reservoir and viscosity measurements.

(3) The owner or operator of an affected source following the compliance method of R307-343-6(2)(b) shall maintain the following records:

(a) Copies of the calculations to demonstrate that the control system achieves emission control equivalent to the requirements of R307-343-4(1)(a) or (b), as well as the data that are necessary to support the calculation of the emission limit in Equation 3 and the calculation of overall control efficiency in Equation 6;

(b) Records of the daily average value of each continuously monitored parameter for each operating day. If all recorded values for a monitored parameter are within the range established during the initial performance test, the owner or operator may record that all values were within the range rather than calculating and recording an average for that day; and

(c) Records of the pressure drop across the catalyst bed for sources complying with the emission limitations using a catalytic incinerator with a fluidized catalyst bed.

(4) The owner or operator of an affected source subject to the work practice standards in R307-343-5 shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including:

(a) Records demonstrating that the operator training program is in place;

(b) Records maintained in accordance with the inspection and maintenance plan;

(c) Records associated with the cleaning solvent accounting system;

(d) Records associated with the limitation on the use of conventional air spray guns showing total finishing material usage

and the percentage of finishing materials applied with conventional air spray guns for each semiannual reporting period;

(e) Records showing the volatile organic compound content of compounds used for cleaning booth components, except for solvent used to clean conveyors, continuous coaters and their enclosures, or metal filters; and

(f) Copies of logs and other documentation to demonstrate that the other provisions of the work practice implementation plan are followed.

(5) In addition to the records required by R307-343-8(1) of this section, the owner or operator of an affected source that complies using the provisions of R307-343-6(2)(a) or R307-343-5 shall maintain a copy of the compliance certifications submitted in accordance with R307-343-9(3) for each semiannual period following the compliance date.

(6) The owner or operator of an affected source shall maintain a copy of all other information submitted with the initial status report required by R307-343-9(2) and the semiannual reports required by R307-343-9(3).

(7) The owner or operator of an affected source shall maintain all records for a minimum of five years.

R307-343-9. Reporting Requirements.

(1) The owner or operator of an affected source using a control system to fulfill the requirements R307-343 is subject to R307-214-2(1) in which the reporting requirements of 40 CFR Part 63, subpart A are incorporated by reference.[~~; and to the following reporting requirements:~~

~~(2) The owner or operator of an affected source subject to R307-343 shall submit an initial compliance report no later than August 1, 1999. The report shall include the items required by R307-343-6(3).~~]

[~~(3)~~](2) The owner or operator of an affected source subject to R307-343 and demonstrating compliance in accordance with R307-343-6(2)(a) or (b) shall submit a semiannual report covering the previous six months of wood furniture manufacturing operations.

(a) Reports shall be submitted on January 2 and July 2 each year.[~~according to the following schedule:~~

~~(a) The first report shall be submitted no later than January 2, 2000 following initial startup.~~

~~(b) Subsequent reports shall be submitted no later than July 2 and January 2 each year thereafter.~~]

[~~(c)~~](b) Each semiannual report shall include the information required by R307-343-6(4), a statement of whether the affected source was in compliance or noncompliance. If the affected source was not in compliance, the measures taken to bring the affected source into compliance shall be reported.

R307-343-10. Compliance Schedule.

(1) All sources within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

(2) New Sources shall submit the following compliance documentation within 60 days of initial startup:

(a) Workplace practice implementation plan as required in R307-343-5(1)(a);and

(b) Initial compliance documentation as required in R307-343-6(3).

KEY: air pollution, ozone, wood furniture[~~*~~], coatings[~~*~~]
Date of Enactment or Last Substantive Amendment: [~~June 2, 1999~~]2006
Notice of Continuation: June 8, 2004
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a); 19-2-104(3)(e)

State of Utah

Department of
Environmental Quality

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DIVISION OF AIR QUALITY
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GARY HERBERT
Lieutenant Governor

M E M O R A N D U M

TO: Air Quality Board

THROUGH: Richard W. Sprott, Executive Secretary

FROM: Robert Clark, Environmental Scientist

DATE: September 6, 2006

SUBJECT: Deletion of R307-332 from the Air Quality Rules

Background:

Section 182(b)(3) of the Clean Air Act (CAA), 42 U.S.C. 7511a(b)(3) originally required that a Stage II vapor recovery program be established for "moderate" or worse ozone nonattainment areas. A Stage II vapor recovery program requires that gasoline stations install equipment to capture emissions during vehicle refueling. Since Salt Lake and Davis Counties were moderate nonattainment areas, a Stage II vapor recovery rule (R307-332) was adopted. However, section 202(a)(6) of the CAA also states that the Section 182(b)(3) Stage II requirement shall not apply in moderate areas after on-board refueling vapor recovery (ORVR) standards are promulgated. The ORVR regulations were promulgated on April 16, 1994 and installation of ORVR components commenced on new vehicles beginning in 1998.

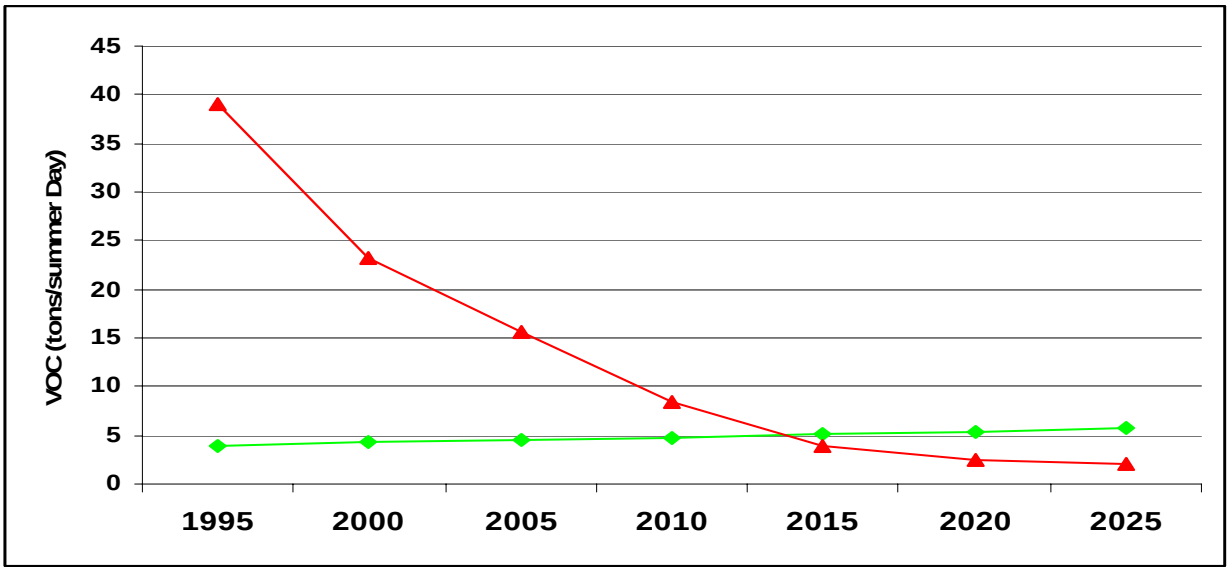
Utah kept the Stage II Vapor Recovery rule as a contingency measure for the 1-hour ozone maintenance plan. The rule was not federally approved because contingency measures for maintenance plans are not required to be automatically implemented, and EPA wanted to provide flexibility if contingencies were needed.

Reasons for not retaining R307-332:

The original Stage II Vapor Recovery System (VRS) was designed to reduce volatile organic compounds (VOC) and hazardous air pollutants (HAPS) from being emitted during refueling of

cars and light duty trucks. It was modeled after the existing California VRS plan and would have been a very expensive ($30,000 to $50,000/station) and politically unpopular system to implement. In addition, there is a point at which the combination of both Stage II VR and ORVR control measures could result in incompatible excess emissions and actually increase emissions.

When the requirement for Stage II VRS was adopted as a contingency measure in early 1993, the expected emission reductions were significant and were anticipated to remain effective for at least fifteen years. As ORVR equipped vehicles became a greater part of the fleet, the expected benefits of Stage II VRS began to decrease. The red line in the graph below shows how the implementation of ORVR has reduced VOC emissions without Stage II VRS. The green line shows expected emissions with Stage II VRS. As can be seen, the benefit of Stage II VRS is decreasing rapidly, and the expected emissions reductions can no longer justify the expense of implementing Stage II VRS.



Other contingency measures that are considered more appropriate are included in the 8-hour ozone maintenance plan.

Recommendation: Staff recommends that R307-332 be deleted.

R307. Environmental Quality, Air Quality.[
~~**R307-332. Davis and Salt Lake Counties and Ozone Nonattainment Areas: Stage II Vapor Recovery Systems.**~~
~~**R307-332-1. Definitions.**~~
~~The following additional definitions apply to R307-332:~~
~~"Control" of a corporation means ownership of more than 50% of its stock.~~
~~"Dispense" means to transfer or allow the transfer of gasoline from a stationary gasoline tank into a motor vehicle fuel tank.~~
~~"Effective" means the percent recovery of gasoline vapors emitted during dispensing of gasoline into motor vehicle fuel tanks.~~
~~"Installation" means a public, private, or government owned or operated establishment that dispenses gasoline at a single location and is subject to R307-332.~~
~~"Independent small business marketer of gasoline" means a person engaged in the retail dispensing and marketing of gasoline unless such person:~~
~~(1) is a refiner, whose total refinery capacity (including the refinery capacity of any person who controls, is controlled by, or is under common control with such refiner) exceeds 65,000 barrels per day;~~
~~(2) controls, is controlled by, or is under common control with such a refiner; or~~
~~(3) is otherwise directly or indirectly affiliated with such a refiner or with a person who controls, is controlled by, or is under a common control with such a refiner (unless the sole affiliation referred to herein is by means of a supply contract or an agreement or contract to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner or any such person), or~~
~~(4) receives less than 50% of his annual income from refining or marketing of gasoline.~~
~~"Stage II trigger date" means the date on which is triggered the Contingency Action Level specified in Section IX.D.2.h(2) of the State Implementation Plan.~~
~~"Stage II vapor recovery system" means a system that meets the requirements of R307-332-2.~~

~~**R307-332-2. Specifications and Approval.**~~
~~(1) For a Stage II vapor recovery system to be used in Utah to comply with this rule the manufacturer or vendor of the system shall submit to the executive secretary documentation that its Stage II vapor recovery system is capable of recovering 95% of gasoline vapor emissions resulting from dispensing gasoline into the motor vehicle fuel tanks. Minimum documentation consists of the California Air Resources Board (CARB) Executive Order pertaining to the Stage II vapor recovery system in question, including all attachments and exhibits or the findings of a testing program that the executive secretary and EPA determines to be equivalent to a California Air Resources Board Stage II vapor~~

~~recovery equipment certification.~~
~~(2) The executive secretary shall review the submitted documentation and certify his approval or disapprove use of the system for compliance with R307-332.~~
~~(3) Only Stage II vapor recovery systems approved by the executive secretary may be used to comply with this rule.~~

~~R307-332-3. Applicability.~~
~~(1) R307-332 applies to installations:~~
~~(a) located in Salt Lake County or Davis County and~~
~~(b) which dispense more than 10,000 gallons of gasoline per month or, in the case of an independent small business marketer of gasoline, which dispense more than 50,000 gallons of gasoline per month; or~~
~~(c) have ever met the conditions of (a) and (b) above.~~
~~(2) Installations located in Salt Lake County or Davis County and which dispense 10,000 gallons or less of gasoline per month, or in the case of an independent small business marketer of gasoline, which dispense 50,000 gallons or less of gasoline per month are exempt from all the requirements of R307-332 except R307-332-4(6) and R307-332-8(4).~~

~~R307-332-4. Compliance Schedule.~~
~~(1) No person shall dispense gasoline from an installation for which R307-332 is applicable except by means of a Stage II vapor recovery system after the dates specified in this subsection.~~
~~(2) The owners or operators of all installations at which construction or gasoline tank replacement commenced after the Stage II trigger date are required to install and operate a Stage II vapor recovery system before dispensing any gasoline.~~
~~(3) Compliance Date.~~
~~(a) Owners or operators of all installations existing before the Stage II trigger date, except independent small business marketers of gasoline, are required to install and operate a Stage II vapor recovery system no later than:~~
~~(i) May 1 of the year after the Stage II trigger date, in the case of installations which dispense 100,000 or more gallons of gasoline per month or for which construction commenced after November 15, 1990 and before the Stage II trigger date or~~
~~(ii) May 1 of the year two years after the year in which the Stage II trigger date occurred, in the case of installations which dispense 10,001 to 99,999 gallons of gasoline per month.~~
~~(b) Any installation described by more than one clause of (2)(a) shall meet the earliest applicable compliance date.~~
~~(4) In the case of installations existing before the Stage II trigger date for which R307-332 is applicable on the Stage II trigger date, and which are owned by an independent small business marketer of gasoline, which dispense 50,000 or more gallons per month, a three year phase in period for the installation and operation of Stage II vapor recovery systems at installations owned by that marketer shall be as follows:~~

(a) 33% of such installations in compliance no later than May 1 of the year after the Stage II trigger date;
(b) 66% of such installations in compliance no later than May 1 of the year two years after the year in which the Stage II trigger date occurred; and
(c) 100% of such installations in compliance no later than May 1 of the year three years after the year in which the Stage II trigger date occurred.
(5) Installations existing before the Stage II trigger date, which met the exemption provisions of R307-332-3(2) and which dispense more than 10,000 gallons of gasoline per month or, in the case of an independent small business marketer of gasoline which dispense more than 50,000 gallons of gasoline per month, are required to install and operate a Stage II vapor recovery system no later than six months after the end of the month for which the gallons of gasoline dispensed or sold by the installation exceeds the number of gallons per month specified in this subsection.
(6) Initially the volume of gasoline sold or dispensed per month for purposes of compliance with R307-332 shall be determined by the average volume dispensed or sold per month over the twenty-four month period immediately preceding the Stage II trigger date. Thereafter, the volume of gasoline sold per month for purposes of compliance with R307-332 shall be determined by a rolling twenty-four month average of the volume dispensed or sold per month. If an installation was inactive for any period during the twenty four month calculation period, the period shall be extended to include a total of twenty four months of activity. If an installation has not operated a total of twenty four months, the average shall be of the portion for which the installation was active. Within 90 days after the Stage II trigger date and by February 1 of every year thereafter, owners or operators of installations shall submit the following information to the executive secretary on forms provided by the executive secretary:
(a) the name and address of the installation owner;
(b) the name and address of the installation;
(c) the number of nozzles and pumps at the installation;
(d) the California Air Resources Board Executive Order Number or identification of non California Air Resources Board certification approved by the executive secretary of any Stage II vapor recovery systems or portions of systems already installed;
(e) a compliance schedule, if applicable; and
(f)(i) in the case of the submittal due 90 days after the Stage II trigger date, the installation's monthly and annual gasoline throughput for twenty four months of active operation immediately preceding the Stage II trigger date or
(ii) in the case of the submittal due on February 1 of every year thereafter, the gasoline throughput for each month of the previous calendar year.

R307-332-5. Installation.
(1) Owners or operators of installations are required to submit, to the executive secretary, Stage II vapor recovery system

~~installation specifications no later than thirty days prior to installation. The submittal shall include the following information:~~

~~(a) the name, address, and phone number of the installation owner;~~

~~(b) the name, address, and phone number of the installation;~~

~~(c) number of gasoline nozzles and pumps at the installation;~~

~~(d) the California Air Resources Board Executive Order Number or identification of non California Air Resources Board certification approved by the executive secretary of the Stage II vapor recovery system to be installed;~~

~~(e) the certification number issued by the executive secretary to the manufacturer or vendor of the Stage II vapor recovery system to be installed to verify approval of the system for use to comply with this rule;~~

~~(f) a site plan of all tanks, dispensers, and underground piping; and~~

~~(g) the date or dates on which construction and installation of the Stage II vapor recovery system is expected to occur.~~

~~(2) Stage II vapor recovery systems shall be installed in accordance with manufacturer specifications and the submittal described in (1) above.~~

~~(3) The installation owner must verify that the Stage II vapor recovery system installed at least meets the requirements of the following tests for which specifications may be obtained from the executive secretary:~~

~~(a) AQB Leak Test Procedure (after "Bay Area ST 30 Leak Test Procedure") or AQB Pressure Decay/Leak Test (after "San Diego Test Procedure TP 92 1 Pressure Decay/Leak Test Procedure"); and~~

~~(b) AQB Pressure Drop vs Flow/Liquid Blockage Test Procedure (after "San Diego Test Procedure TP 91 2 Pressure Drop vs Flow/Liquid Blockage Test Procedure").~~

~~(4) The executive secretary may approve alternatives to the tests specified in (3) above, if requested by the owner or operator and approved by EPA.~~

~~(5) The tests specified in (3) and (4) above shall be performed after notifying the executive secretary as specified in R307 332 11. The test results must be dated and include the name, address, and phone number of the person that performed the tests. Initial testing shall be conducted after the above ground equipment is installed, and must be completed in time to meet the compliance schedule specified in R307 332 4. Testing shall be conducted at the gasoline dispensing pumps.~~

~~(6) A copy of the results of tests conducted in accordance with (3) above shall be maintained on the premises of the installation.~~

~~R307-332-6. Installation Owner/Operator and Employee Training.~~

~~(1) Owners or operators of installations shall provide every installation employee, including the operator[,] that is responsible for the use, operation, or maintenance of a Stage II~~

~~vapor recovery system with training on the purpose, effects, and operation of the installation's Stage II vapor recovery system as specified by the system manufacturer.~~

~~(2) Owners or operators of installations shall provide at least one employee that is responsible for the maintenance of a Stage II vapor recovery system with training specified in (1) above and on the maintenance schedules and requirements, manufacturer contacts for parts and service, and warranty provisions of the installation's Stage II vapor recovery system as specified by the system manufacturer.~~

~~(3) No installation operator or employee may operate or be responsible for the operation of a Stage II vapor recovery system prior to completion of the training specified in (1) above.~~

~~(4) No installation operator or employee may repair; authorize or supervise repair; or perform, authorize, or supervise maintenance of a Stage II vapor recovery system prior to completion of the training specified in (2) above.~~

~~(5) Proof of the training specified in (1) above shall be maintained on the installation premises for each installation operator and employee for which such training is required.~~

~~(6) Proof of the training specified in (2) above shall be maintained for each installation operator and employee for which such training is required.~~

~~(7) Records of training specified in R307 332 6 will be made available to representatives of the executive secretary upon request.~~

~~R307-332-7. Operation and Maintenance.~~

~~(1) A copy of the operating and maintenance documentation provided by the Stage II vapor recovery system manufacturer shall be maintained at the installation and be available to installation employees.~~

~~(2) The system shall be operated and maintained in accordance with operating and maintenance documentation provided by the Stage II vapor recovery system manufacturer.~~

~~(3) Modification or repair of Stage II vapor recovery systems shall be conducted in accordance with manufacturer specifications and using parts approved by California Air Resources Board or the executive secretary.~~

~~(4) The owner or operator of a Stage II vapor recovery system shall upgrade the system to comply with any modification of the California Air Resources Board executive order for the system no later than six months after the California Air Resources Board executive order for the system is modified.~~

~~(5) The owner or operator of the Stage II vapor recovery system shall maintain a record of all maintenance and repairs for the system. The record shall include a general description of any parts replaced or repaired, the date of the repair or replacement, the manufacturer and part number of any part replaced, a general description of the part location in the system, and a description of the problem.~~

R307-332-8. Records.

Owners or operators of installations shall maintain up to-date copies of:

(1) Stage II vapor recovery system installation, testing documentation, and maintenance records as long as the system is in place;

(2) Stage II vapor recovery system inspection and compliance reports and records filed in chronological order for the preceding two years;

(3) records of current employee Stage II vapor recovery system training; and

(4) records of the volume of gasoline delivered and dispensed each month of the preceding twenty four month period.

R307-332-9. Pump Labeling Requirements.

(1) The owner or operator of any installation that dispenses gasoline by means of a Stage II vapor recovery system is required to label pumps as follows.

(a) The label letters shall be in block letters of no less than 20 point type, at least 1/16 inch stroke (width of type), and of a color that contrasts with the label background color.

(b) The label shall affixed to the front upper half of the vertical surface of the gasoline pump on each side with gallonage and dollar amount meters from which gasoline can be dispensed and shall be clearly readable to the pump user.

(c) Information on the label shall include:

(i) a general explanation of how the Stage II vapor recovery system works and how it should be operated;

(ii) notice that the user should not attempt to overfill the motor vehicle gas tank;

(iii) notice that the purpose of Stage II vapor recovery systems is to minimize gasoline emissions from motor vehicle refueling; and

(iv) the name and telephone number of the Division of Air Quality.

R307-332-10. Self Inspections.

(1) The owner or operator of an installation shall ensure that the following tests and inspections are performed as specified.

(a) After notification as specified in R307 332 11, one of the tests specified in R307 332 5(3)(a) or another test or tests approved by the executive secretary and EPA, shall be conducted for every Stage II vapor recovery system at each installation every third year after the initial test required by R307 332-5(3)(a) or at any installation that the executive secretary has any indication that leaks may exist.

(b) After notification as specified in R307 332 11, the test specified in R307 332 5(3)(b), the AQB Dynamic Back Pressure Test, or another test or tests approved by the executive secretary and EPA, shall be conducted for every Stage II vapor recovery system at each installation every fourth year after the initial test

~~required by R307-332-5(3)(b) or at any installation that the executive secretary has any indication that a blockage may exist.~~

~~(c) After notification as specified in R307-332-11, a functional test shall be conducted every year on any and all auto shut-off mechanisms and flow prohibiting mechanisms on all dispensing nozzles to determine if the mechanisms are functional.~~

~~(d) Visual inspections shall be conducted at a frequency sufficient to ensure:~~

~~(i) that all the Stage II vapor recovery equipment is present, is maintained in the certified configuration, and is in proper working order, including, but not limited to: nozzles and nozzle parts (faceconе, bellows, springs, latches, check valves), hoses and hose hanger/retractors, flow limiters, swivels, collection units, control panels, system pumps, processing units, vent pipes and any and all other system related parts;~~

~~(ii) compliance with all Stage II vapor recovery system label requirements as specified in R307-332-9; and~~

~~(iii) that all Stage II vapor recovery system equipment is being operated properly, including dispensing units, processors, handling units, and any other system related equipment.~~

~~(2) Stage II vapor recovery systems or portions of Stage II vapor recovery systems found to be malfunctioning shall be taken out of service until repaired.~~

~~R307-332-11. Test Notification Requirements.~~

~~(1) The owner or operator of an installation shall notify the executive secretary in writing at least thirty days before conducting a test to comply with R307-332-5(3) or (4), or R307-332-10(1)(a), (b) or (c).~~

~~(2) The notification required in (1) above shall include:~~

~~(a) the name, address, and phone number of the installation;~~

~~(b) the name of the test;~~

~~(c) the name and telephone number of the person that will conduct the test; and~~

~~(d) the time and date on which the test shall be conducted.~~

~~(3) If the results of a test listed in (1) above do not show compliance with standards specified in the appropriate test specification, the owner or operator of an installation shall notify the executive secretary by five P.M. on the first working day after the test. Notification shall include the name, address, and phone number of the installation and the name of the test.~~

~~KEY: air pollution, motor vehicles, gasoline, ozone~~
~~Date of Enactment or Last Substantive Amendment: September 15, 1998~~
~~Notice of Continuation: August 5, 2003~~
~~Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-104~~]

DEQ - Meetings Subject to the Requirements of the Open and Public Meetings Act

		Subject to Open and Public Meetings Act?
If the meeting is:		
1)	of a "public body" (administrative, advisory, or executive body created by statute or rule that consists of two or more persons and is vested with authority to make decisions regarding the public's business),	
2)	with a quorum present,	
3)	a convening of the body to include a workshop or an executive session held in person or by means of electronic communications or a site visit or traveling tour, and	Yes
4)	for the purpose of the public body discussing or acting upon a matter over which it has jurisdiction or advisory power.	Yes
If the meeting is:		
	A chance or social meeting of a public body	No
Closed meeting:		
1)	if approved by two-thirds of a quorum, and	
2)	if the matters discussed are the a) character, professional competence, or physical or mental health of an individual b) pending or reasonably imminent litigation c) deployment of security personnel, devices, or systems d) investigative proceedings regarding alleged criminal misconduct e) adjudicative deliberation (see Common Cause of Utah v. Utah Public Service Commission (1979), 598 P2d 1312)	Yes

(Other purposes justifying closing a meeting but which are usually not applicable to DEQ are listed in UCA Section 52-4-205)

A resolution, rule, contract or appointment may not be approved at a closed meeting.

DEQ – Open Mtgs Act – Public Notice Requirements

For each open meeting the following requirements must be met: **Checklist**

1) At least 24 hours prior public notice of each meeting. ☐

2) Public notice includes:
a. the meeting date, time, and place (for electronic meetings the anchor location where the public may attend), and
b. the agenda listing each topic and item to be considered at the meeting with reasonable specificity (a topic not listed that is raised during an open meeting may be discussed but no final action may be taken). ☐

3) Written notice posted at the principal office of the public body, or if no principal office exists, at the building where the meeting is to be held, and for electronic meetings at the anchor location. ☐

4) Notice provided to at least one newspaper of general circulation within the geographic jurisdiction of the public body and (statute states "or", rule states "and") a local media correspondent. ☐

In addition, yearly, the following must be met:

1) Public notice given at least once a year for a public body which holds regular meetings that are scheduled in advance over the course of a year. ☐

2) Notice includes the date, time and place of the scheduled meetings ☐

3) Notice is posted and provided to media as described above for individual meetings. ☐

Encouraged, but not required:

1) Use electronic means to provide notice to media ☐

2) Provide public notice to all media that make a periodic written request to receive notice ☐

3) Post public notice on the Internet ☐

Emergency Meeting (requires approval of majority of members based on unforeseen circumstances making it necessary):

1) If public notice requirements can't be met, the best practicable notice shall be given which at a minimum shall include:
a. posting the agenda and notice of the meeting at agency office,
b. if meeting is electronic, specify the anchor location where public can attend, and
c. electronic or telephonic notice to at least one newspaper of general circulation and one local media correspondent. ☐

2) Attempt to notify all members of a public body, and if meeting is electronic advise how members may appear electronically. ☐

Closed Meeting
Requires same public notice for open meeting ☐

DEQ - Recording and Minutes Requirements under the Open and Public Meetings Act

Open Meetings:

Written minutes and recording, both, are required of all meetings covered by the Act except either minutes or recording is required for site visits or a traveling tour but only if no vote or action is taken, otherwise both are required.

Recording shall be a complete and unedited record of all portions of the open and closed meeting (except as discussed below for some closed meetings) from the commencement through the adjournment.

Checklist

Minutes and recording shall include:

1) date, time and place of the meeting, ☐

2) names of members present and absent, ☐

3) the substance of all matters proposed, discussed or decided, ☐

4) a record, by individual member, of votes taken, ☐

5) the name of each person who provided testimony and the substance in brief of their testimony, and ☐

6) any other information that any member requests be entered in the minutes or recording ☐

7) for emergency meetings, statement of unforeseen circumstances that made meeting necessary ☐

8) the reasons for closing all or any portion of a meeting, location of closed meeting, and the vote by name, of each member, either for or against closing a meeting. ☐

Closed Meetings:

1) public body shall make a recording, and may keep written minutes (except if meeting is closed exclusively for the purpose of discussing character, professional competence, or physical or mental health of an individual, or deployment of security personnel, devices, or systems and the presiding officer signs a sworn statement affirming the purpose for closed meeting) ☐

2) recording and minutes shall include:
   a) Date, time, and place of meeting
   b) Names of members present and absent
   c) Names of all others present except where disclosure would infringe on confidentiality necessary to fulfill purpose of closing meeting ☐

Clean Air Mercury Rule (CAMR)

Update to the Air Quality Board; Sept. 6, 2006

General Facts About the Federal Claen Air Mercury Rule (CAMR)

- It targets Coal-Fired Electrical Generating Units (EGUs) serving generators that are 25 Mega Watts or larger.
- It sets nation-wide caps on mercury emissions:
    - 38 tons/yr in Phase-1 2010-2017
    - 15 tons/yr in Phase-2 2018 and beyond
    - This compares with EPA's estimate of 48 tons/yr for existing levels of mercury emissions from EGUs in the U.S.
- Each State has been allocated a cap total for each phase of the program. Utah's allowances are:
    - 0.506 tons/yr (1,012 lbs/yr) for 2010-2017
    - 0.200 tons/yr (400 lbs/yr) for 2018 and beyond
    - This compares with EPA's estimate of 0.142 tons (284 lbs) emitted in 1999, and implies that Utah will be a net seller of emission credits (most likely to sources in the East.)
- Each State must demonstrate compliance each year with its caps. The model rule includes a market trading program which States may use, or they can establish emission limits to stay within the caps.
- Any additional generating capacity will have to fit within these caps.
- All states and tribes will need to submit plans to implement the rule by November 17, 2006.

Utah's Mercury Proposal

Utah will propose a two-tiered approach to mercury emissions from coal-fired electric generating units.

The first element will involve participation in the Federal CAMR program.

- It will rely closely on EPA's model rule to demonstrate compliance with the CAMR. The model rule uses a cap and trade program to show compliance with the nation-wide mercury reduction goals.
- EPA has invited States and Tribes to make certain modifications as they see fit. Utah is proposing to modify certain elements of the model rule, regarding the allocation of mercury allowances.

The second element will be separate from the CAMR, and apply only to sources in Utah.

- It would set minimum emission standards for existing facilities;
- and require offsets for increases in mercury emissions for new or modified units.

Progress Report

DAQ is using this Board meeting, as well as an e-mail list, to notify interest parties that Utah's proposal is now available for public inspection on our website.

A tentative schedule for these actions is included below. It anticipates that staff will be coming to the UAQB with a proposal to initiate rulemaking at its November meeting.

The schedule does not meet the November 17, 2006 submittal date identified above; however, Utah is not unusual in that regard, and the EPA assures us that we are proceeding within an acceptable frame of time.

……

Tentative Schedule for the Utah Mercury Plan

The table below identifies some of the more significant milestones in developing the Mercury SIP.

Milestone	Anticipated Completion Date
Refine Draft based on Stakeholder Input	September – October, 2006
State/Board Approval for Proposed Rulemaking	November, 2006
State/Board Approval	February, 2007
Revised Plan submitted to EPA	March, 2007

State of Utah

Department of Environmental Quality

Dianne R. Nielson, Ph.D.
Executive Director

DIVISION OF AIR QUALITY
Richard W. Sprott
Director

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

DAQC-1087-2006

MEMORANDUM

TO: Air Quality Board

FROM: Richard W. Sprott, Executive Secretary

DATE: August 8, 2006

SUBJECT: Compliance Activities –July 2006

Annual Inspections Conducted:

A 12
SM 8
B..... 3

Initial Compliance Inspections Conducted:

A 2
SM 2
B..... 1

On-Site stack test audits conducted: 4
Stack test report reviews:..... 15

On-site CEM audits conducted:..... 0
Emission reports reviewed:..... 9

[1]Miscellaneous inspections conducted..... …...44
Complaints received: 39

VOC inspections:

Tanker trucks 1
Degreasers..... 0
Paint Booths..... 1

Source Compliance Action Notice issued..... 3
Notices of Violation issued..... 0

Compliance Advisories issued..... 4

Settlement Agreements resolved..... 0

Penalties Collected..... $00.00

Notices of Violations issued:

None

Compliance Advisories issued:

Geneva Rock Products, Inc
Frehner Construction Co., Inc.
Flying J Transportation
Nielson Construction Co.

Settlement Agreements Reached:

None.....$00.00

_____

[1]Miscellaneous inspections include, e.g., surveillance, level I inspections, complaints, on-site training, dust patrol, smoke patrol, open burning, etc.

State of Utah

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M E M O R A N D U M

DAQH-0631-06

TO: Utah Air Quality Board

FROM: Richard W. Sprott, Executive Secretary

DATE: August 24, 2006

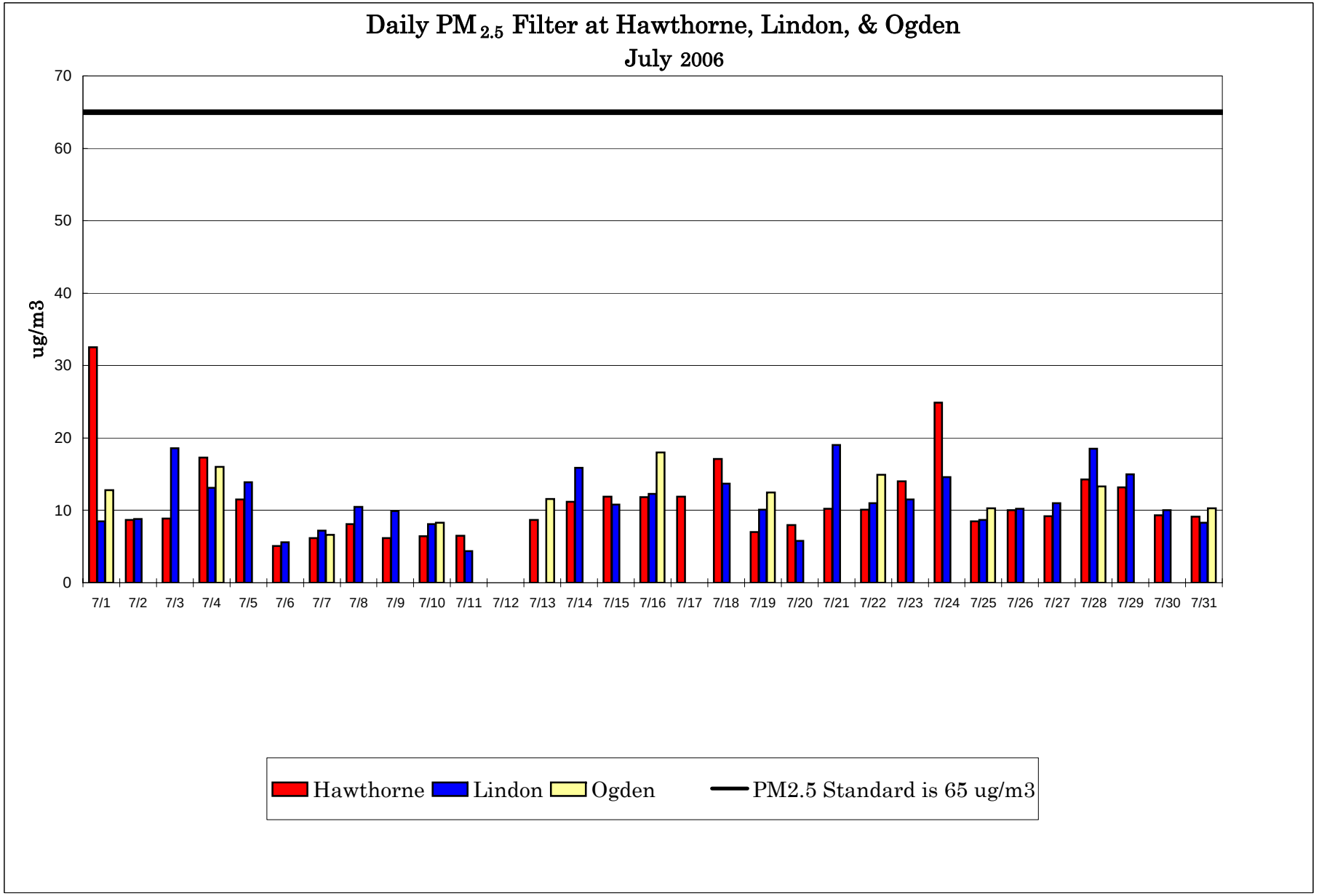
SUBJECT: Hazardous Air Pollutant Section Compliance Activities – July 2006

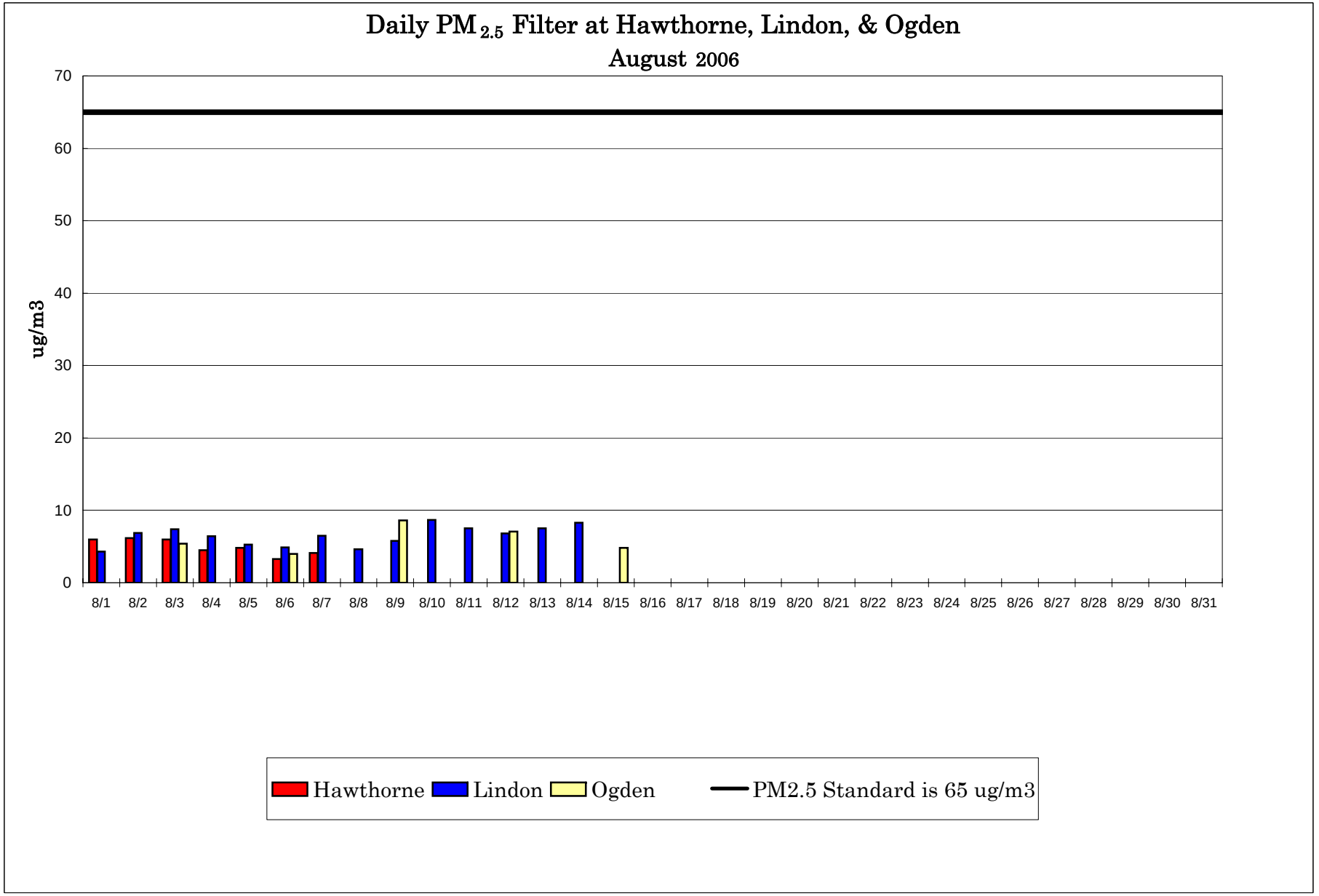
Asbestos Demolition/Renovation Inspections	0
Asbestos in School Inspections	6
MACT Compliance Inspections	12
Other NESHAP Inspections	3
State Rules (Only) Inspections	0
Asbestos Notifications Accepted	104
Asbestos Phone Calls Answered	331
Asbestos Individuals Certifications: Approved/Disapproved	60/0
Company Certifications/Re-certifications	1/2
Alternate Asbestos Work Practices: Approved/Disapproved	4/0
Lead Based Paint (LBP) Inspections	4
LBP Notifications Approved	4
LBP Phone Calls Answered	98

LBP Letters prepared and mailed	27
LBP Courses Reviewed/Approved	0/0
LBP Course Audits	1
LBP Certifications Approved/Disapproved	10/0
LBP Company Certifications	0
Small Business Phone Calls Answered	9
Notices of Violation Issued	0
Notices of Noncompliance (NON)	0
Compliance Advisories Issued	3

Fred Schafer – Dugway Proving Ground
Donna Kirkham
Fresh Air/Granite School District

SCANS or Warning Letters Issued	13
Settlement Agreements Finalized	0
Penalties Agree to	0


Daily PM2.5 Filter at Hawthorne, Lindon, & Ogden
July 2006
ug/m3
70
60
50
40
30
20
10
0
7/1 7/2 7/3 7/4 7/5 7/6 7/7 7/8 7/9 7/10 7/11 7/12 7/13 7/14 7/15 7/16 7/17 7/18 7/19 7/20 7/21 7/22 7/23 7/24 7/25 7/26 7/27 7/28 7/29 7/30 7/31
Hawthorne
Lindon
Ogden
PM2.5 Standard is 65 ug/m3


Daily PM2.5 Filter at Hawthorne, Lindon, & Ogden
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ug/m3
70
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Hawthorne
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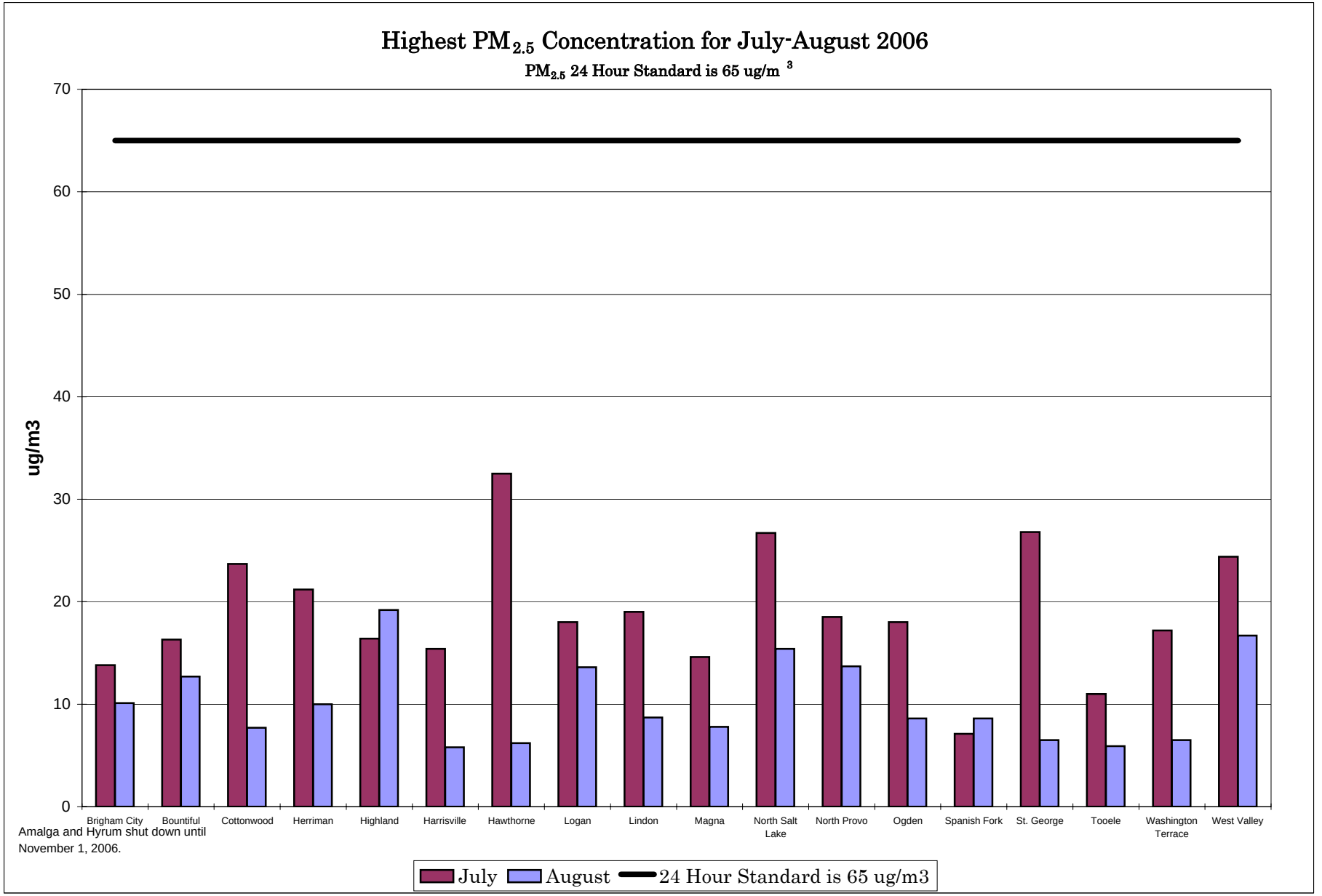
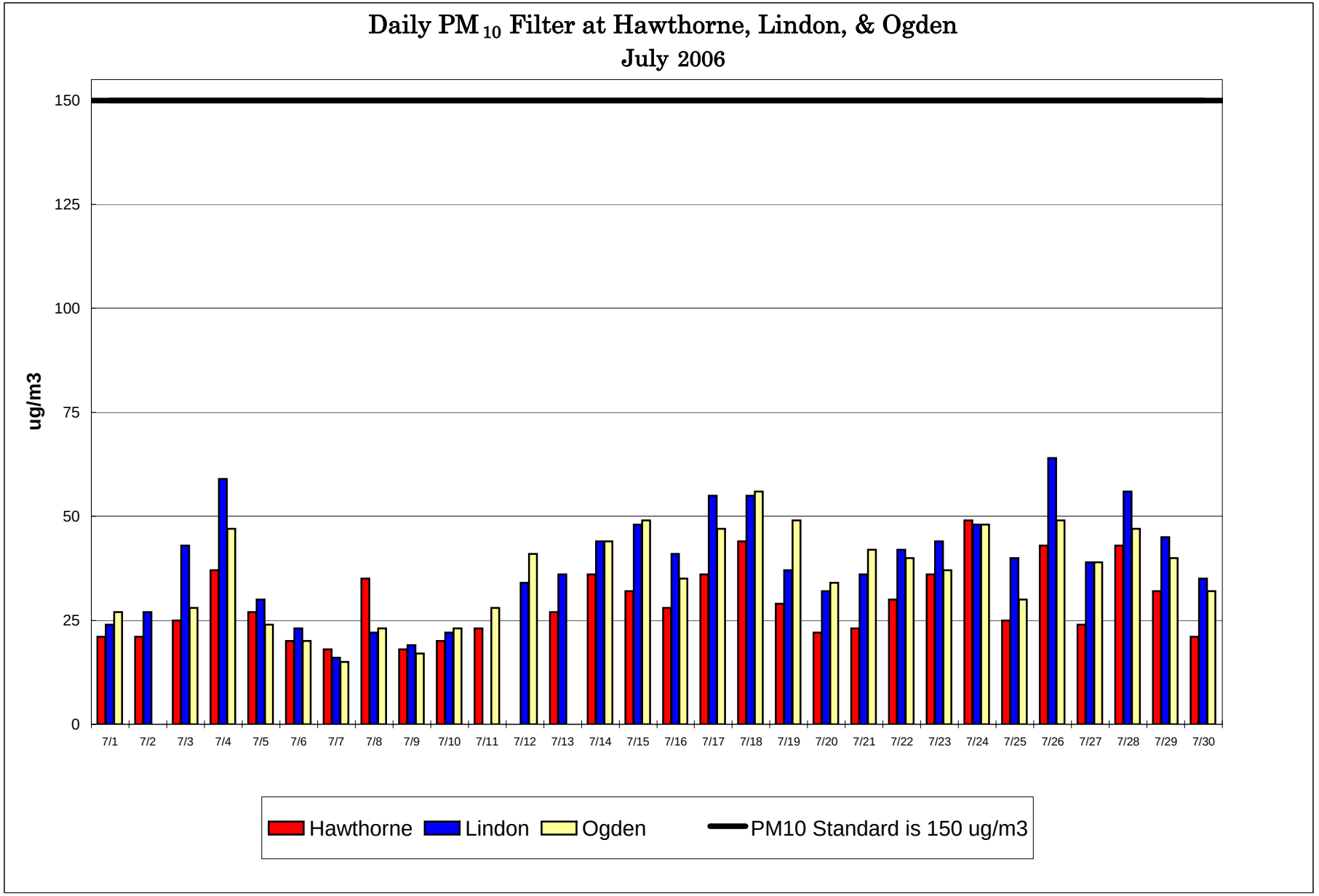
Ogden
PM2.5 Standard is 65 ug/m3


Highest PM2.5 Concentration for July-August 2006
PM2.5 24 Hour Standard is 65 ug/m 3
ug/m3
70
60
50
40
30
20
10
0
Brigham City
Bountiful
Cottonwood
Herriman
Highland
Harrisville
Hawthorne
Logan
Lindon
Magna
North Salt Lake
North Provo
Ogden
Spanish Fork
St. George
Tooele
Washington Terrace
West Valley
Amalga and Hyrum shut down until November 1, 2006.
July
August
24 Hour Standard is 65 ug/m3


Daily PM 10 Filter at Hawthorne, Lindon, & Ogden
July 2006
ug/m3
150
125
100
75
50
25
0
7/1
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7/3
7/4
7/5
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7/7
7/8
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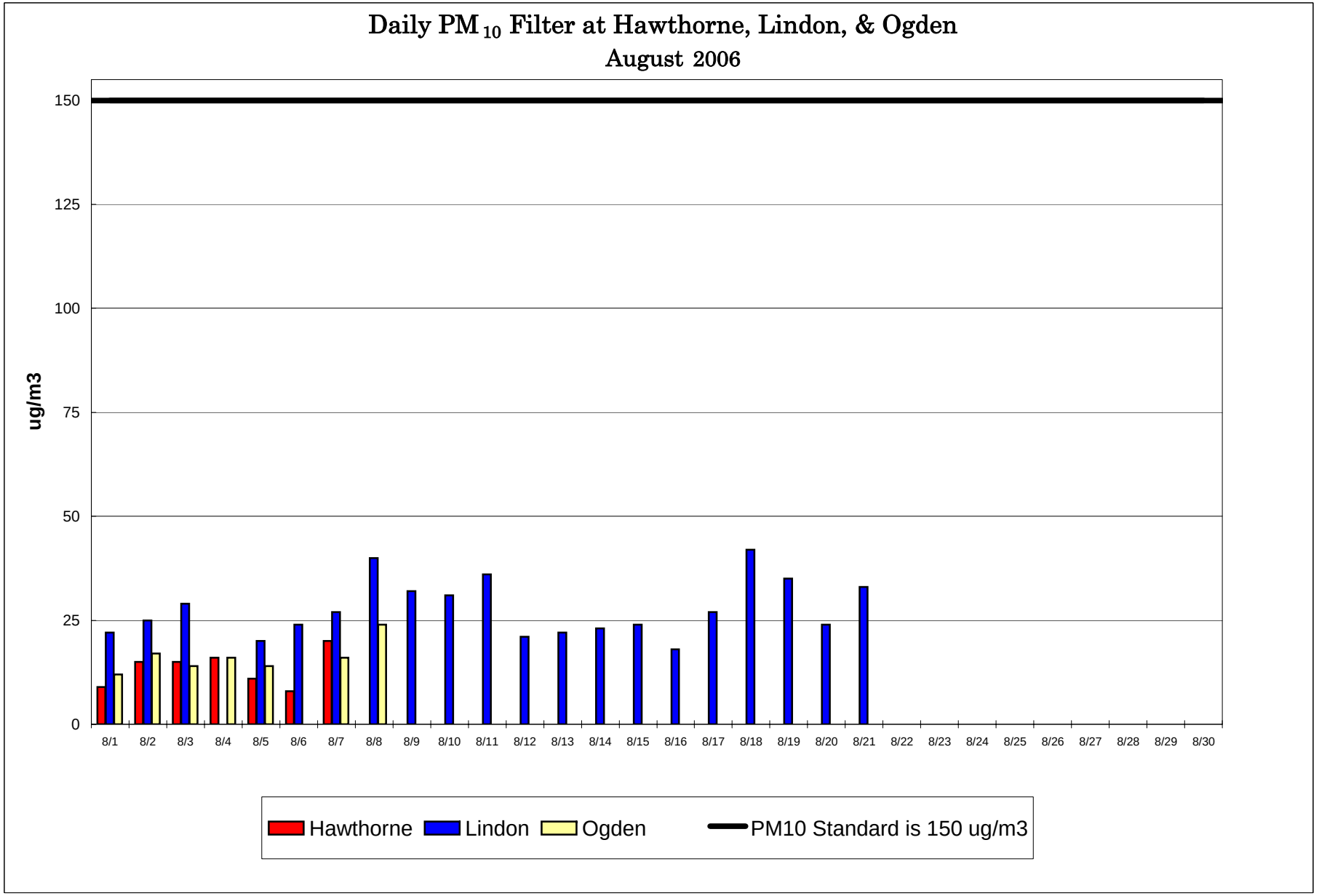
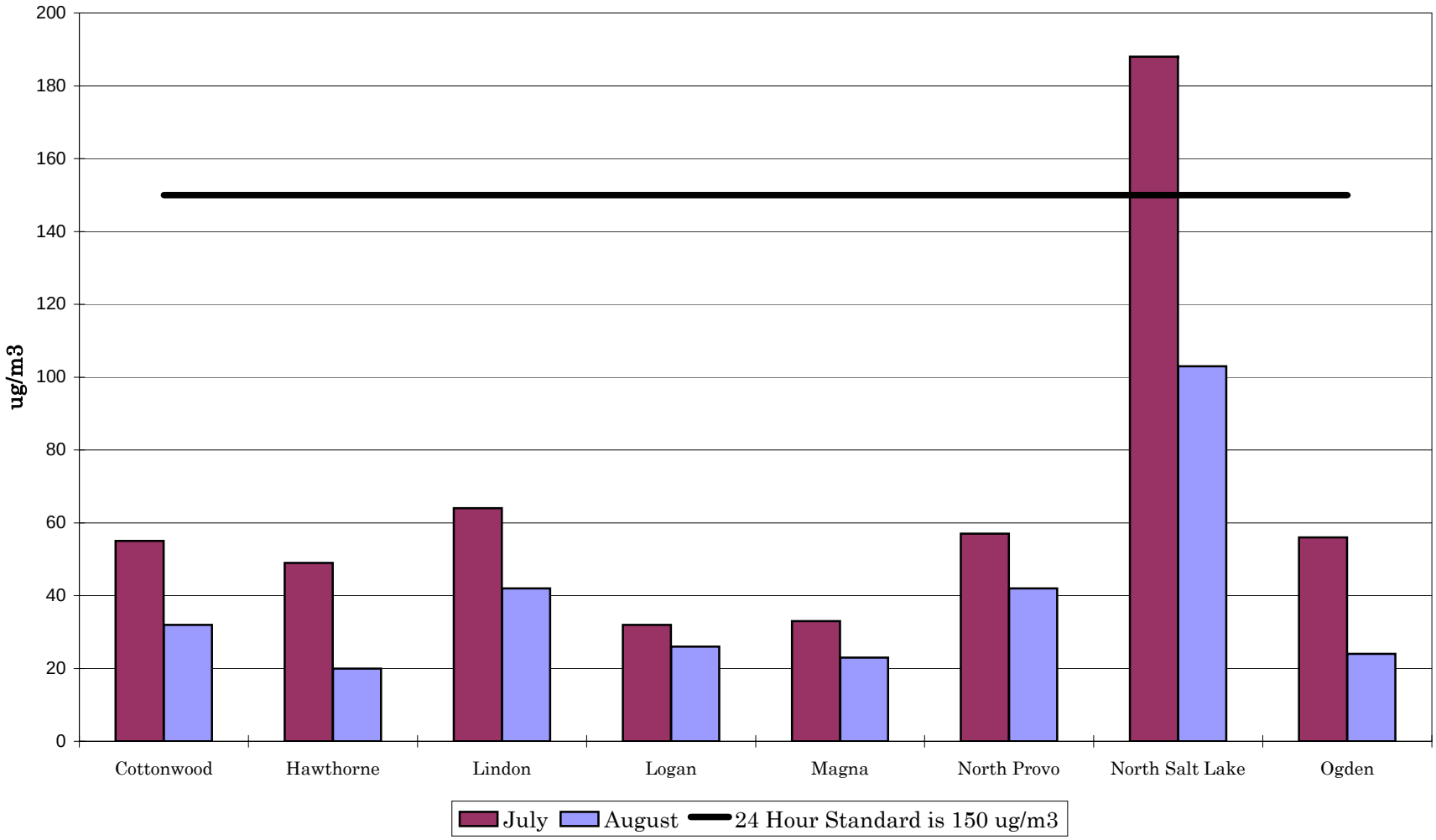
Hawthorne
Lindon
Ogden
PM10 Standard is 150 ug/m3



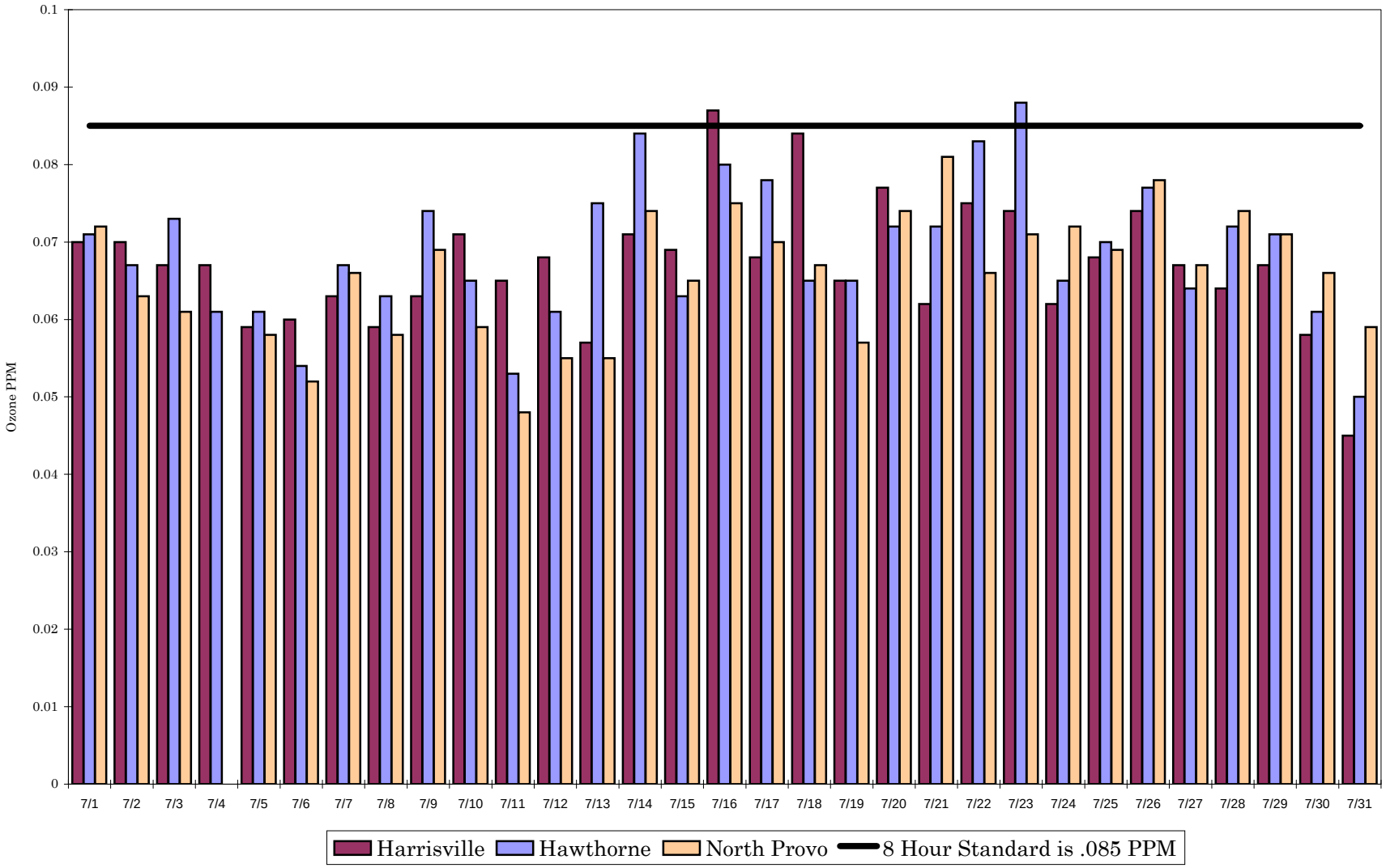
Utah Division of Air Quality

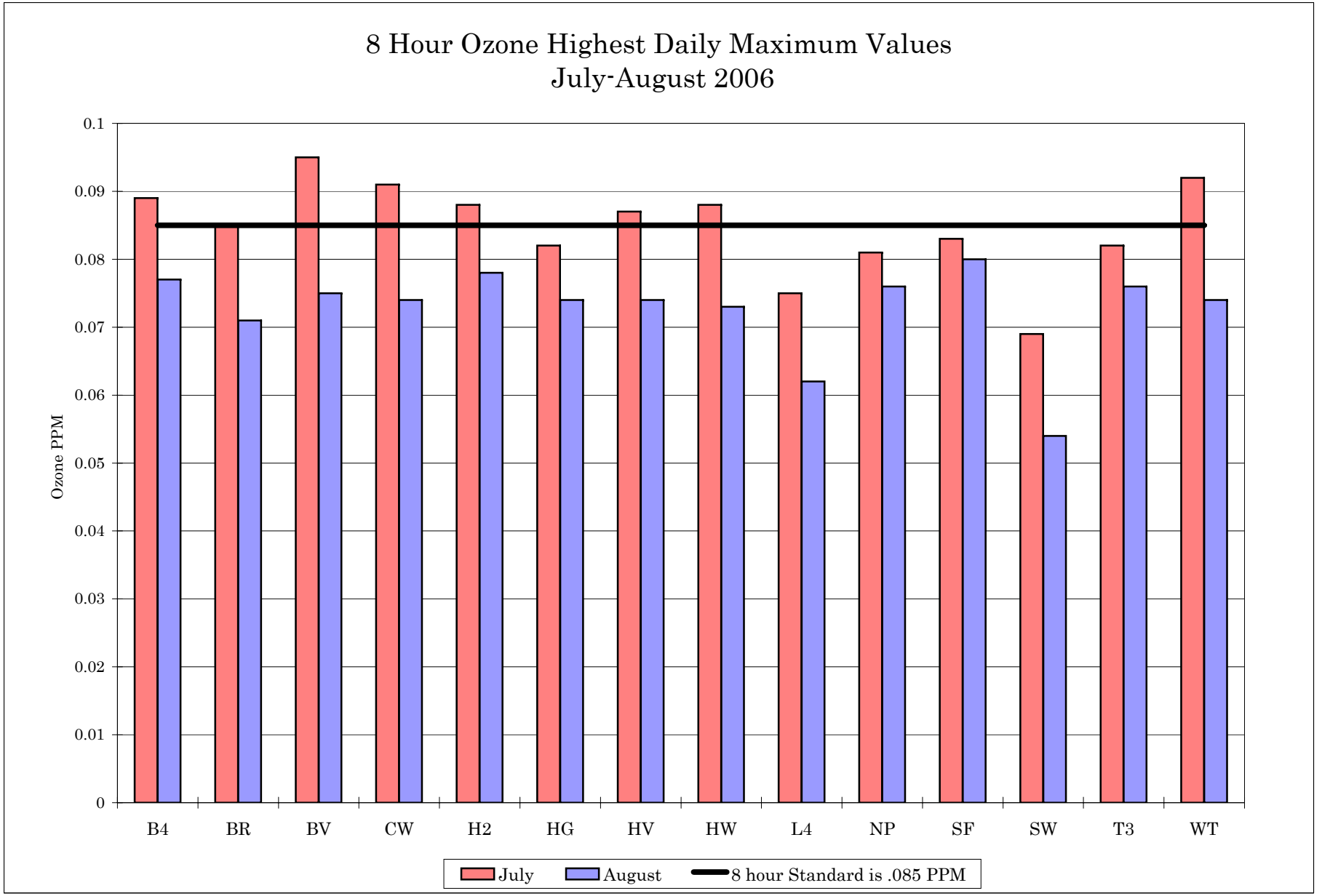
Highest PM_{10} Concentration for July-August 2006

PM_{10} 24 Hour Standard is 150 ug/m ^{3}



8 Hour Daily Maximum Ozone Values
July 2006




8 Hour Ozone Highest Daily Maximum Values
July-August 2006
Ozone PPM
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
B4
BR
BV
CW
H2
HG
HV
HW
L4
NP
SF
SW
T3
WT
July
August
8 hour Standard is .085 PPM